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THE ROLE OF ANIMAL EXPERIMENTATION IN THE DISCOVERIES LEADING TO OUR PRESENT KNOWLEDGE OF THE ETIOLOGY, PREVENTION AND CURE OF DIPHTHERIA*

W. H. PARK, M.D.

Director of the Research Laboratory, Health Department NEW YORK

The disease which is now called diphtheria is believed to have been prevalent in Europe for a long time. We have reason to think that it occurred at first chiefly in epidemics. The great increase of population and travel during the past one hundred years with its necessary mingling of infected and non-infected persons has aided its dissemination, so that it is endemic in many countries.

THE IDENTITY OF "CROUP" AND LARYNGEAL DIPHTHERIA

It is very important when studying deaths from diphtheria to remember that physicians did not formerly recognize, as we now do, that various forms of ulcerated throat and croup are forms of a single disease. In fact they did not realize this until Bretonneau in 1826 appreciated the fact and gave the disease, however manifested, the name of diphtheria. Bretonneau's statements were soon accepted by many in France, but were not so quickly adopted in the rest of Europe and in America. As late as 1855, he was compelled to reassert his reasons for his conviction, that membranous croup and membranous pharyngitis were both forms of diphtheria, and that either form was capable of communicating the other. He adduced in proof of these statements the details of small epidemics in which in the same family, or group of families, different persons presented every form of the disease. He also showed how nurses caring for cases of "croup" frequently contracted the pharyngeal form of the disease. Bretonneau and those who agreed with him gradually convinced the majority of physicians and so we find such names as inflammation of the throat, sprue, etc., gradually disappearing as they were recognized as forms of diphtheria. The designation "croup" has remained much longer because it designated briefly a form of diphtheria which because of its location in the larynx had special symptoms and required special treatment. This gradual inclusion of all forms of the disease under the name diphtheria has led to confusion among some who do not believe in the value of antitoxin for, failing to note the change in the reporting, they have believed that deaths from diphtheria instead of being greatly diminished have remained nearly constant.

The following extracts from the mortality tables of the Department of Health of the City of New York show interestingly how the name diphtheria has supplanted other names for special varieties of the disease.

GRADUAL SUBSTITUTION IN DEATH CERTIFICATES BY PHYSICIANS OF NEW YORK CITY OF THE NAME DIPHTHERIA FOR EARLIER SPECIAL DESIGNATIONS

Year	Inflammation of Throat	Sprue	Angina	Croup	Diphtheria
1856	50	49	14	550	....
1858	70	56	11	478	5*
1860	132	15	37	599	422
1862	68	27	2	685	594
1864	18	4	37	754	781
1865	..	4	5	449	534
1875	..	..	..	758	2,329
1895	..	..	..	342	1,634

* First use of name diphtheria.

As already stated, laryngeal diphtheria has continued to be reported by some as croup, but, as the years have passed, more and more have designated the disease rather than its location, so that the proportion of cases reported as diphtheria has grown ever greater.

Thus in 1860 there were reported in New York City 599 deaths from croup and 422 from diphtheria or an approximate ratio of 1.4 : 1; in 1875 there were reported 758 cases of croup and 2,329 of diphtheria, or a ratio of 0.3 : 1; in 1895 there were reported 342 cases of croup and 1,634 of diphtheria or a ratio of 0.2 : 1.

Exactly the same changes have been taking place in nomenclature everywhere; thus the registrar general's report for England and Wales, 1898, says, "With regard to the changes which have taken place from time to time in the nomenclature of diphtheria, it is important to bear in mind the following points:

> Diphtheria as a distinct affection had scarcely been recognized in England previous to 1855, in which year this disease was first separated from scarlet fever in the national records of the causes of death. As to the unity of diphtheria and croup it states: "The diphtheria epidemic of 1863 was accompanied by parallel movements in the mortality ascribed to croup." After giving more reasons the report continues: "These facts taken in conjunction certainly warrant the assumption that by far the greater number of deaths hitherto attributed to croup have been caused by laryngeal diphtheria."

This gradual recognition of the true nature of croup came about with the clearer understanding of the disease. With our present knowledge we now know that when Francis Home gave the name croup to a certain disease which attacked the larynx and altered the voice, he described by that name true laryngeal diphtheria. Home's accounts of his autopsies make this very clear.

The correctness of the view stated by the registrar general's report, that fatal croup is laryngeal diphtheria,

* This paper is one of the series prepared for and reprinted by the Bureau on Defense of Medical Research of the Council on Health and Public Instruction of the American Medical Association for circulation among the public. Twenty-two of these pamphlets are now ready, taking up the relation of animal experimentation to ethics, diagnosis, cancer, vaccination, the live stock industry, tuberculosis, typhoid, dysentery, plague, rabies, surgery, internal secretions, circulation of the blood, tropical diseases, syphilis, obstetrics, etc. A price-list will be sent on application.

seems so evident that it is difficult to believe that those who affirm they are different diseases, are really sincere.

It would only be necessary for persons having such a belief to look up the cases reported as deaths from diphtheria and they would find that more than 75 per cent. of all such deaths were due to laryngeal diphtheria and that they presented the identical symptoms described by Home in his work published in 1765, entitled "An Enquiry into the Nature, Cause and Cure of Croup." At least, if they believe that croup is not diphtheria, they should eliminate all deaths from diphtheria statistics which are due to croup.

The importance of realizing that the vast majority of cases of croup are diphtheria is, in the first place, that they may be treated as such, and in the second place, that we may rightly judge the benefit derived from antitoxin treatment as shown in the lessened mortality in cases of croup. It would be as reasonable to assert that cases previously designated meningitis had ceased to exist, because with better knowledge we were able to place them under inflammations due to the tubercle bacillus or to the meningococcus, as to state that croup seldom occurred because it was now usually reported as laryngeal diphtheria.

THE MEANS BY WHICH WE OBTAINED OUR PRESENT COMPREHENSIVE KNOWLEDGE CONCERNING THE NATURE AND PREVENTION OF DIPHTHERIA

The careful clinical observations of cases and the study of the spread of the disease, without resort to animal experiments, yielded many facts which justified the conclusion that diphtheria was a contagious disease producing definite lesions in the pharynx and larynx. There remained numerous cases, however, the nature of which continued doubtful. There seemed indeed no way to differentiate between these cases, unless possibly a specific microorganism could be discovered. Many attacked the investigation of this problem. Laycock published a paper in Edinburgh in 1859 declaring that diphtheria was due to the *Oidium albicans*. One after another discovered different organisms which they tried to connect with the disease. Klebs demonstrated in 1881, that there were no microorganisms in the internal organs of the majority of diphtheria patients. Two years later he demonstrated that in sections there were near the surface of the membrane, little rod-shaped bacteria. In the same year, Heubner showed that pyogenic cocci were regularly present, but that these, while pathogenic for animals, still did not produce lesions like those of human diphtheria. He came to the conclusion that the organism was yet to be discovered. Koch at that time laid down his three postulates which required as proof that any of the numerous varieties of microorganisms, shown to be present in the throat in cases of diphtheria, was the exciting factor, the finding of the organism in the affected part, its isolation in pure culture and its reproduction of the disease when inoculated in pure culture.

The investigations due to Koch's suggestions led to the discovery of the diphtheria bacillus and of its antidote. The following pages will again and again have to record the fact that these results would have been impossible without animal experimentation.

THE DISCOVERY OF DIPHTHERIA BACILLUS BY LOEFFLER

As already stated, the results published prior to the investigations of Loeffler were so inconclusive that many different kinds of bacteria were under consideration as the possible cause of the disease. Loeffler in 1884 reported the results of a very careful series of studies. He examined sections stained by a special alkaline solution of methylene blue, of the locally affected parts and also of the organs of patients who had died of diphtheria. These investigations showed that the lesions were not always uniform in character, but could be arranged in various groups. The first group was characterized by loss of substance and the presence of greyish-yellow necrotic material, false membranes being absent. All the cases of post-scarlatinal diphtheria belonged to this group. Micrococci, arranged in chains, were found pushing their way in wedge-like masses into the tissues and leaving necrotic areas behind them. Masses of micrococci were also frequently found in the organs of fatal cases. In the second group, thick false membranes occurred on the deeply congested mucous membranes of the throat, larynx or bronchi. Masses of bacteria of various kinds were found covering the surface of the false membranes in disorderly confusion, and more deeply, small rods were found arranged in groups and stained most intensely with methylene blue.

Anatomic and cultural investigations indicated that either streptococci or the bacilli now known to be the diphtheria bacilli were the exciting organisms, but gave no conclusive proofs of the specific significance of either. As other means failed, it was necessary to discover whether either of them was capable of producing in animals a disease analogous to human diphtheria. Experiments were made with pure cultures of the streptococci and other micrococci in a number of animals, mice, guinea-pigs, rabbits and monkeys, partly by feeding, and partly by subcutaneous, intratracheal and intravenous inoculations. Certain animals, especially mice, died from septicemia, with numerous chains of cocci in the blood, but in no case was a disease produced which resembled diphtheria. Since these organisms were only discovered alone in a limited number of cases simulating human diphtheria, and since they have been found similarly arranged in the organs in other infective diseases which are associated with lesions of the mucous membrane, Loeffler came to the conclusion that, in diphtheria also, the chain-forming micrococci were merely of secondary importance, occasionally invading the body under favorable conditions and giving rise to slight or grave local and general complications. Loeffler also regarded it as possible that the chain-forming micrococci might set up a disease resembling diphtheria by attacking the mucous membranes of the throat and multiplying in the lymph spaces.

With the pure cultures of the suspected bacilli obtained from a number of cases experiments were made on several species of animals. Mice were not affected by inoculations, but guinea-pigs died with characteristic lesions, greyish-white, pseudo-membranous masses at the seat of the inoculation, hemorrhagic edema, effusion into the pleural cavities, lobular consolidation of the lungs and catarrhal inflammation of the kidneys. The bacilli were found usually in small numbers only at the seat of inoculation, but were never observed in the organs. These facts "clearly indicated that a poison produced at the seat of inoculation must have circulated in the blood." Characteristic and striking results were obtained by the inoculation of rabbits. After inoculation of the conjunctiva was performed, the parts became much swollen and covered with whitish tough membranes. Inoculations into the opened trachea produced tracheitis, leading in the majority of cases to the formation of more or less extensive false membranes, which occasionally extended into the bronchi. The operation

wounds frequently became covered with fibrinous deposits accompanied by hemorrhagic edema of the neck. Extension of the process from the trachea into the pharynx was never observed. In the false membranes, the bacilli were only found in small numbers and were only observed in those parts of the mucous membrane which were injured during inoculation and which appeared to be totally absent from the internal organs. Since the animals died, in spite of the scarcity of bacilli, Loeffler considered that this confirmed his idea that death was due to the absorption of a chemical poison produced by the bacilli at the site of inoculation.

These results of animal tests established for all time the rôle of the diphtheria bacillus as the sole essential exciting factor in producing diphtheria. The streptococci and other pathogenic bacteria were proved to be an associated and engrafted infection, which at times probably became as dangerous as the diphtheria bacilli, as in the case of a complicating pneumonia or septicemia. The idea of Loeffler that the lesions distant from the original site of the disease were caused by soluble poisons was proved correct by the work of Roux and Yersin. The injection of the filtrate from cultures produced the same histologic lesions in guinea-pigs as infection with the culture. Without animal tests it would have been impossible to determine this, for the chemical composition of diphtheria toxin is still unknown to us.

The etiologic importance of the bacillus isolated by Loeffler being established, it was possible to establish the nature of doubtful cases. Numerous tests by means of animal inoculations in cases of croup occurring in many parts of Europe and America showed that the opinion of Bretonneau, that fatal croup was almost invariably laryngeal diphtheria, was absolutely correct. Other discoveries were made, such as the fact that there were many mild cases of diphtheria which had not been recognized and had thus been fruitful sources of contagion. It was also disclosed that convalescent cases carried virulent bacilli for weeks or months after recovery and that healthy persons who were brought into contact with diphtheria were occasionally infected and thus might become carriers of diphtheria bacilli, infecting others though escaping themselves.

In all these discoveries it was necessary to use guinea-pigs because it was found that there were harmless bacteria in the throat which so closely resembled the diphtheria bacilli in every respect, except that of poison production, that the two could only be separated and identified through the injection of guinea-pigs.

The information thus obtained proved to be very useful and it was hoped that the intelligent separation, through practical cultures, of suspected cases into those that were diphtheria and those that were not, would make it possible to isolate the one and liberate the other. It was also believed that examination of persons exposed to diphtheria would make it possible to detect the diphtheria bacillus carriers and so prevent their disseminating the germs of the disease. Experience showed that while we could act much more intelligently than before, yet the doubtful cases and the bacillus carriers were so numerous that the problem was too difficult to handle. While the culture test was reliable in cases with exudate, it proved unreliable in convalescent cases and in bacillus carriers because the bacilli might at the moment be so few at the time of making the culture as to be missed, and the case passed as free from contagion, when, in fact, diphtheria bacilli were present in some recess ready to multiply at any moment. We found that in New York City, during the winter months, nearly 1 per cent. of the children are diphtheria bacillus carriers. These conditions, together with the influence of increasing congestion of the population, brought it about that the deaths from diphtheria (which had diminished for a time after the promulgation of Loeffler's discovery), began again to increase. Fortunately, the discovery by Behring, of the antitoxic power of the blood of animals which have recovered from slight poisoning with the toxin produced by the diphtheria bacillus, gave us a new and potent preventive which also could be used as a cure. This discovery would have been absolutely impossible without animal experimentation, for diphtheria antitoxin is only known by the fact that it acts to neutralize the poisonous action of the toxin. Furthermore, every lot of antitoxin which is sent out must be produced by animals and must be tested in animals.

THE RÔLE OF ANIMAL EXPERIMENTATION IN THE DISCOVERY AND PRACTICAL PRODUCTION OF DIPHTHERIA ANTITOXIN

Behring discovered that not only was an animal, after recovery from a less than fatal dose of diphtheria toxin, immune to an otherwise fatal dose of a diphtheria culture, but also, the far more important point, that the blood-serum contained the protective substance and that this injected into another animal conferred immunity. By testing a number of animals it was found that the horse produced the largest amount of this protective substance. By judicious treatment with repeated inoculations of toxins the antitoxin accumulated in the blood, since it was so slowly eliminated, and the newly formed antitoxin after each injection was added to the major part of that formed in response to the previous injections. It was found that when an animal is injected with the antitoxin produced by one of its own kind, its immunity lasts from four to six months, but when injected with antitoxin produced in another species, immunity lasts only two or three weeks. This difference in the retention of the antitoxin is of both practical and theoretical interest. As human beings always receive antitoxin produced by the horse, the duration of immunity is limited to about two weeks. With each repetition of the injection there is a restoration of the immunity. The duration of immunity as estimated in animal tests has been also proved in man by the exposure of persons during epidemics. The long retention of antitoxin in the bodies of animals of the same species as the one producing it, proves it to be a true cell product.

THE VALUE OF ANTITOXIN IN THE PREVENTION AND TREATMENT OF DIPHTHERIA

I shall first consider the results with which I have been personally familiar. The experience that we have had in New York in the immunization of persons subjected to danger of infection has been very extensive.

The health department inspectors immunized fourteen thousand six hundred persons last year. These were all exposed to contact with diphtheria. In the last three years over thirty-five thousand cases have been treated without a single serious accident. Very few of these contracted diphtheria and not a single one died of the disease. In over 100,000 persons immunized since the introduction of antitoxin there has been but one known fatality due to the serum injection. This child suffered from status lymphaticus and died shortly after an injection of 1,000 units. This was four years ago and followed an injection of serum which had not been refined. The sister of the child received 5,000 units

from the same vial and suffered no deleterious after-effects.

Two occasions in which the immunizing value of the antitoxin was strikingly manifested are the following: The first was in an epidemic that was raging in a large institution for children. It broke out in the fall of 1894, a few weeks before we obtained our first antitoxin. Every endeavor was made to isolate not only the sick, but also those from whom diphtheria bacilli were obtained. These measures proved to be insufficient and three or four new cases developed daily. The danger to the children was so great that we decided to use the greater part of a small consignment of antitoxin which we at that time obtained from Germany. All the children were given a moderate injection (300 units). The epidemic ceased at once and no new case developed after the day of the injections for a full ten days when one mild case developed. This summer an epidemic started in a large insane asylum near New York City. Within six days of the discovery of the first case, many developed. These were not only among patients, but also among the doctors and nurses. As rapidly as possible over two thousand persons were given 1,000 units of antitoxin. No immunized person was attacked and the epidemic was stopped within less than a week. Similar experiences to those we have had in New York City have been met with wherever antitoxin has been used.

TREATMENT

The value of antitoxin in the treatment of disease is not so readily determined as in the prevention. Our experimental tests in animals show that as soon as antitoxin enters the blood-stream it neutralizes any toxin present, but that it only slowly passes through the capillaries to reach any toxin which has passed out previously or is still retained in the mucous membranes at the site of the disease. When antitoxin is subcutaneously injected it is absorbed quickly enough to render the blood-current feebly antitoxic within a few minutes, but strongly so only after several hours, for the antitoxin is apparently chemically allied to the globulins and, like them, is slowly absorbed. Animal tests have demonstrated that by injecting antitoxin into the vein of a patient, we immediately stop further passage of toxin from the blood-stream, and, within a short time, we neutralize any toxin in the tissue fluids and so prevent further injury of cells whether situated at the point of disease or at distant parts. Animal experiments give us no reason to believe that cellular injury already accomplished can be remedied. Antitoxin is really therefore a preventive of further poisoning and cannot restore to health those who have suffered irreparable injury, any more than rescuing from the fire can save one from death who has been burned to an extent incompatible with continued life. Animal experiments give us reason to expect that in cases of diphtheria treated early, the lesions will not advance. In early cases the patients will recover and in the more advanced cases they will improve at least locally, but in many cases they will die from paralysis due to the progress of degeneration from previous injury or complications such as pneumonia, due to bacteria, the toxins of which are not neutralized by diphtheria antitoxin.

RESULTS OF ANTITOXIN TREATMENT

It is now sixteen years since the antitoxin treatment of diphtheria began to be used. At first only a small percentage of the patients received the treatment, but steadily year by year a greater proportion of patients were injected with serum until now probably 90 per cent. of all cases are treated with antitoxin. The cases treated in one year in the United States equal at least one hundred thousand and those treated in Europe must total nearly one quarter of a million more. If antitoxin is of real value, we shall find as it becomes more used, a lessened number of deaths, and an increasing consensus of medical opinion in its favor.

THE ABSOLUTE MORTALITIES DURING A LONG SERIES OF YEARS IN LARGE CITIES AS AN INDEX OF THE VALUE OF ANTITOXIN TREATMENT

Of all methods at present available, perhaps the least open to error is a comparison of the absolute number of deaths per 100,000 before and after the introduction of antitoxin.

To be of value, statistics of this kind must cover a long period of years. While this, of course, is true for all kinds of statistics it is particularly important in diphtheria in which mortality figures move up and down in irregular waves. These irregularities, however, become apparent only when a considerable number of years are taken into account. For example, in the six years ending 1882, the average of deaths per 100,000 from diphtheria and croup was always above 140 in Baltimore, and reached 200 or over in three of these years. In the seven years following, the mortality fell sharply and continuously until it reached its lowest point in 1889, when it was 52 per 100,000; yet no difference in treatment occurred in 1882.

Care must therefore be taken to secure readings which do not constitute merely a part of an epidemic, unless due allowance be made for this fact. In order to distinguish epidemics, it is necessary to know the average number of deaths for many years. Lack of this knowledge was the weak point in a number of earlier statistic studies and was made use of by the opponents of serum therapy. Further, statistics of this kind ought to be taken mainly from the large cities, for reports of deaths are usually indifferently kept in the rural districts. It must also be remembered that, at first, antitoxin was used in only a minority of the cases and often at too late a stage of the disease.

In compiling the following statistics, therefore, we have taken only cities having over 125,000 inhabitants, in which the registration of deaths has long been efficient. Apart from these two points the cities were taken at random, some from the United States, some from Great Britain, and the remainder from the continent of Europe. The figures are in all cases from the official records and are, with the exception of Paris, the combined "diphtheria" and "croup" figures. In order to overcome the fluctuations commonly seen in diphtheria mortalities, we have gone back to 1878, i. e., fifteen years prior to the introduction of antitoxin, and have carried our figures up to December 31, 1905, i. e., ten years after the use of antitoxin. We believe that the evidence thus obtained of the great value of diphtheria antitoxin is overwhelming. The figures obtained by us of the deaths in a number of the cities up to the present year show a continuous lessening in the deaths.

Before giving the combined figures of many cities, we shall give those for New York City since 1860 and some for England and Wales and London. The English figures are especially interesting as there has been much discussion of the results in England. The conditions there were somewhat peculiar.[1] The antitoxin treat-

1. Thirty-Ninth Annual Report of the Local Government Board for 1909-10, Appendix A, No. 1, pp. 6 and 7.

ment was slower in being adopted than in continental Europe and America. Then again, diphtheria had been increasing for a couple of years and this epidemic influence continued until 1899. The fact that during the earlier years membranous croup was not reported as diphtheria and later was included with it, made it possible to mislead by quoting only those reported as diphtheria. This subject has already been fully considered.

STATISTICS FROM NEW YORK CITY

Year	Deaths from Diphtheria and Croup in the Old City of New York	Deaths Per 100,000
1878	1,506	132
1879	1,193	101
1880	2,300	190
1881	3,287	264
1882	2,254	184
1883	1,653	125
1884	1,838	136
1885	2,180	158
1886	2,695	188
1887	3,056	206
1888	2,553	167
1889	2,291	146
1890	1,783	110
1891	1,970	118
1892	2,105	123
1893	2,558	145
1894	2,870*	158*
1895*	1,976*	105*
1896	1,763	91
1897	1,590	81
1898	923	46
1899	1,085	53
1900	1,276	62
1901	1,227	58
1902	1,142	53
1903	1,270	56
1904	1,270	57
1905	860	38
1906	983	39
1907	1,015	40
1908	1,097	41
1909	1,065	39
1910	1,034	37
1911†	787	28

* The Antitoxin Laboratory established in the autumn of 1894. Free distribution to the poor begun early in 1895.
† Estimated for last four months.

The deaths during the first eight months of 1911 are 24 per cent. less than during the same period of 1910. If this improvement continues the death-rate will be 28, or about one-fifth of the average before the introduction of antitoxin. In the whole city of New York, there were reported from January 1 to April 1, 1911, 4,198 cases, and 411 deaths as against 4,957 cases and 597 deaths in 1910. The case fatality was thus only 9.8 per cent. as compared with 12 per cent.

DIPHTHERIA IN LONDON

Year	London Rates per 1,000 Persons Living		Hospitals of Metropolitan's Asylum's Board. Mortality Percentage in Diphtheria Cases Treated in Hospital *
	Notifications	Deaths *	
1892	1.96	.44	29.3
1893	3.18	.74	30.4
1894	2.58	.61	29.3
1895**	2.57	.52	22.8
1896	3.07	.59	21.2
1897	2.97	.50	17.7
1898	2.66	.39	15.4
1899	3.05	.43	13.9
1900	2.66	.34	12.3
1901	2.68	.29	11.1
1902	2.31	.25	11.0
1903	1.68	.16	9.7
1909	1.39	.126	9.8

This table is from page 7 of Appendix A of thirty-ninth annual report of the local government board.
* These figures include those dying from "membranous croup."
** Introduction of antitoxin treatment.

From the last registrar general's report we find that there were in England and Wales 8,609 deaths in 1889, 10,516 deaths in 1894, 10,301 deaths in 1899 and 5,889 deaths in 1908 from diphtheria and membranous croup. The death-rate in 1889 was 30.3; in 1894, 34.7; in 1899, 32.4, and in 1908, 16.6 per 100,000.

Combined statistics of deaths and death-rates from diphtheria and croup in New York, Brooklyn, Boston, Pittsburgh, Baltimore, Philadelphia, Berlin, Cologne, Breslau, Dresden, Hamburg, Königsberg, Munich, Vienna, London, Glasgow, Liverpool, Paris, Frankfort.

Year	Population	Deaths from Diphtheria and Croup	Deaths Per 100,000
1890	16,526,135	11,059	66.9
1891	17,689,146	12,389	70.0
1892	18,350,737	14,200	77.5
1893	18,467,970	15,726	80.4
1894	19,033,902	15,125	79.9
1895*	19,143,188	10,657	55.6
1896	19,489,682	9,651	49.5
1897	19,809,629	8,942	45.2
1898	20,037,918	7,170	35.7
1899	20,358,857	7,256	35.6
1900	20,764,614	6,791	32.7
1901	20,874,572	6,104	29.2
1902	21,552,398	5,630	26.1
1903	21,865,209	5,117	23.4
1904	22,532,848	4,917	21.8
1905	22,790,000	4,323	19.0

* Introduction of antitoxin treatment.

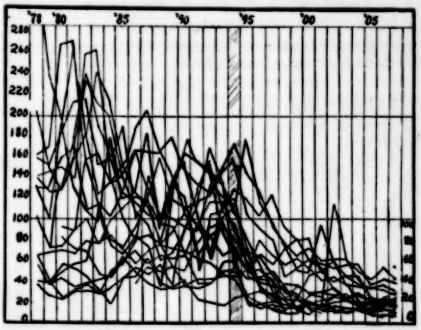

Chart showing deaths from diphtheria (including membranous croup) per 100,000 in nineteen large cities, 1878-1908. The death-rate of each of the nineteen cities is represented by a line. The marked lowering of the death-rates is clear in spite of temporary variations in certain cities.

We see from these figures that although there were marked fluctuations in the absolute mortality per 100,000 in the pre-antitoxin years, in no period did all of the cities show a decrease. Thus in 1884 about half of the cities show a decline and the other half an increase in mortality; the same is true for 1888. Not until we come to the critical year, 1894, do we find almost all the cities showing a like behavior, a drop in the mortality per 100,000. This drop, moreover, has continued until the present time. The difference between 79.9 per cent. in 1894 and 17 per cent. in 1907 is so great and the time of the beginning of the decrease so coincident with the introduction of the antitoxin treatment that it is difficult to attribute any other explanation than that the saving of life was due to antitoxin.

THE RESULTS OBTAINED IN HOSPITALS AND ELSEWHERE IN THE YEARS BEFORE AND AFTER THE INTRODUCTION OF ANTITOXIN

The figures from the London hospitals have already been given. They show that a mortality of 29 per cent. has been reduced to about 10 per cent.

The Boston City Hospital[2] has had a similar experience. Before the use of antitoxin about 70 per cent. of the patients presenting intubation cases died; now only about 35 per cent. die.

At the Hospital for Contagious Diseases in New York City very few patients having membranous croup die

2. See article by Park and Bolduan, quoting from McCollom's 1905 report.

unless they develop pneumonia. We have little fear of the outcome in any uncomplicated case of diphtheria which receives the antitoxin early.

Similar results have been obtained by physicians in Europe and America both in hospitals and private practice. The results are much the best in cases of patients treated early in the disease. Royer[3] has analyzed 3,894 cases of diphtheria in which the patient received antitoxin treatment as to the results according to the day on which treatment was begun.

DEATH-RATE ACCORDING TO DAY OF INJECTION

	Death-Rate
218 cases treated on first day	....
1,153 cases treated on second day	4.59
880 cases treated on third day	12.50
598 cases treated on fourth day	16.40
351 cases treated on fifth day	14.24
694 cases treated after fifth day.....	14.15
Total, 3,894 cases.....	10.57

THE SIMULTANEOUS OBSERVATION OF CASES OF DIPHTHERIA RECEIVING AND NOT RECEIVING THE ANTITOXIN TREATMENT

Fibinger[4] observed during a period of time a series of cases of alternate patients treated with and without antitoxin.

Among 238 patients treated with antitoxin, 8 died (mortality 3 per cent.).

Among 245 patients treated without antitoxin, 30 died (mortality 12 per cent.).

This method, however, for obvious reasons cannot be extensively used. We made in 1895 a similar test at the Willard Parker Hospital, but the difference in the behavior of the patients appeared to us to be so greatly in favor of those treated with antitoxin that the test after six weeks was stopped and all patients since that time have received antitoxin.

A POSSIBLE DECLINE IN THE VIRULENCE OF THE DISEASE

The observation of the cases of patients who come to us without having had antitoxin treatment, indicates that there has been no marked change in the average virulence of the disease.[5]

THE EXTENT TO WHICH ANTITOXIN IS USED

The observations made under the direction of the Department of Health show that in New York City almost every physician uses antitoxin. There are a good many patients among the poorest classes who do not receive antitoxin early, but this is because a physician has not been called to see the child.

The health authorities of all the northern states have arrangements for making antitoxin available either for the poor or for all classes. So far as I can determine there is no hospital for the care of diphtheria patients in any part of the world in which diphtheria antitoxin is not used.

AFTER-EFFECTS OF SERUM INJECTION

Serum carrying the antitoxin is apt to produce after-effects of varying intensity. These effects are due chiefly or altogether to the serum and not to the antitoxin or other antibody which it carries, which is proved by the fact that serum containing no antibodies gives the same symptoms. This fact is of importance, and has led to the elimination of much of the useless serum elements.

3. Modern Treatment, Hare, p. 815.
4. Reported by Faber, 1904.
5. See chapter on Mortality in Bacteriology of Diphtheria, Nuttall and Graham Smith, p. 594.

FIRST INJECTION

Von Pirquet and Schick have given the name "serum sickness" to the symptoms caused by an injection of serum. After an incubation period which usually covers from five to twelve days, local redness and itching or swelling surrounded by urticarial wheals develop. This is followed by swelling of the lymph nodes, fever, a rash which may spread over the body, edema and swelling of the joints. These symptoms all develop only in severe cases, various combinations occur, and one or another symptom may be most prominent. In the great majority of cases, the rash is the most prominent symptom and is best likened to an attack of "hives" and is of no more seriousness.

Only about 20 per cent. of those injected with serum develop a rash and in many cases only a local reaction occurs.

In a few cases, the reaction occurs more quickly. An immediate general reaction is very rare. This immediate general reaction may be severe and alarming; in a very few instances it has been fatal.

Not all the cases described as fatalities due to the serum will stand close investigation. Some are clearly due to heart paralysis caused by the diphtheria toxemia, and in some the cause is doubtful. These serious accidents have been mostly in adults and many of the cases were asthmatics. How rarely this occurs is seen from our own experience in New York City, already referred to, where only two fatalities occurred since the introduction of antitoxin. If we refer to the number of deaths from diphtheria in nineteen cities for 1894 and 1904 we find there is a reduction of over 10,000. On this basis, one is safe in estimating that the daily saving of life by antitoxin is greater than the total number of fatalities due to its use during the entire sixteen years since its introduction. Further, the danger from immediate general reactions is fortunately almost *nil* in young children. It is in them that the disease causes the greatest loss of life, and antitoxin must be used most freely.

SECOND INJECTION

Arthus, in 1903 at the instigation of Lichet, investigated the results of repeated injections of horse serum into rabbits. Rosenau and Anderson, Otto and others observed the results in guinea-pigs. They found that serum itself gave no toxic effects on the first injection, but if a certain time was allowed to elapse the succeeding injections were toxic. Von Pirquet also found that when a second injection in man gave symptoms, these came on much more quickly, at times immediately, instead of occurring after an incubation period of some days. An interval of about ten days must elapse between two injections for this change in reaction to become evident.

With this interval coming between, the second injection in man is apt to be followed by a local reaction in a few hours and a general reaction within twenty-four hours. In some cases the reaction comes on in a few minutes. These reactions may in some cases be much more violent than reactions following the first injection; in some instances they have been alarming. The most important point, however, is the change in the time of reaction.

THE FREQUENCY OF SERUM REACTIONS

The frequency of serum reactions increases somewhat with the size of the dose; thus Weaver[6] reports that 11 per cent. of those receiving less than 10 c.c. of serum

6. Arch. Int. Med., 1909, iii, 485.

showed reactions, while 27 per cent. developed symptoms when between 10 and 20 c.c were given. The serum of some horses is more apt to cause a rash than that of others; further, some people react more readily than others.

ERADICATION OF AFTER-EFFECTS

The first method that would occur to anyone would be to give as much antitoxin as possible with a minimum of serum. One way to do this is to have very high potency serum so that little need be used. If we could separate the antitoxin from the serum elements this would be the ideal way. A long step in this direction has been taken. The antitoxin is bound up with a portion of the globulins. These are separated from the other constituents, giving a refined and concentrated antitoxin. In this way a large number of units can be given in a small bulk, and naturally less foreign proteid than if the same number of units had been given in the original serum.

This globulin solution containing antitoxin can be injected with much less tendency to produce serum after-effects.

After-effects do still occur, and in rare instances are serious, but compared with the benefits of antitoxin, viz., in the prevention of diphtheria and the saving of thousands of lives yearly, they are very small indeed. There is every possibility that with further experimental work, based on animal tests, the antitoxin will be obtained in a practically pure state, and that even these few untoward effects will be wholly eliminated.

315 West Seventy-Sixth Street.

ELEMENTS OF ERROR IN STATISTICS OF BREAST AMPUTATION FOR CANCER

W. S. THORNE, M.D.
SAN FRANCISCO

I have long held the belief that the statistics of recoveries after operations for neoplasms of the female breast, diagnosed as cancer, were unreliable as a basis of scientific knowledge.

It is not my purpose in presenting this paper to arraign a settled professional judgment, or to impeach the accuracy of eminent observers. My object is to emphasize the fact that tumors of the breast diagnosed as malignant, do not, in a certain considerable percentage of cases, undergo malignant degeneration, and that the histologic arrangement of a tumor does not necessarily determine its future life history or development; that certain tumors removed for malignancy would, if unmolested, eventually disappear. This announcement may be regarded as rank heresy, although easily demonstrable; and if proved, render, *pro tanto*, the records of recoveries for long periods of time after amputation of the breast for cancer, unreliable. Opinions based on the macroscopic appearances of breast tumors are no longer regarded as of much diagnostic value. The topography, mobility, density, contour, duration, absence of adhesions, trauma, pain, sensations, family history, etc., are contributory evidences. The final decision as to diagnosis rests on morbid histology. But there is obviously something more required than microscopic arrangement of cells in order to predict malignant activity in a given tumor; essential factors in the chemistry, biology and physiology of malignant and benign neoplasms that have thus far eluded our cognition. Dr. H. Gideon Wells,[1] in an interesting paper on "The Resistance of the Body to Cancer," refers to the abundant available evidence that the human body has some means of natural defense against cancer, and that this property of resistance applies more or less to all tumors. Among the natural means of defense he cites the following:

1. Spontaneous local inhibition or temporary retardation of growth.
2. Retardation of recurrence after removal.
3. Retrogression of secondary growths after removal of the primary tumor.
4. Disappearance of portions of tumor tissue left after an incomplete operation.
5. Spontaneous healing of a primary tumor without any operative intervention whatever.

Actual spontaneous disappearance of tumors, microscopically determined to be malignant, is attested by numerous eminent observers; e. g., Martin of Greifswald reports spontaneous disappearance of scirrhus of the cervix and vaginal vault, microscopically determined, with no recurrence after twenty-two years; Jacobsthal, carcinoma of the temple; Saar, a small carcinoma of the breast, and the spontaneous healing of chorion tumors observed by Gaylor and Clows and the spontaneous disappearance of superficial carcinoma observed by Mohr and others. The processes of natural defense in these cases are variously ascribed to calcification and the ensnaring and invasion of the cancer cell-nests by fibrous tissue and the strangulation of cancer tissue by fibrous overgrowth. This body resistance to active malignant proliferation is abundantly attested and proves the presence of at least one constant element of error in the surgical statistics of cancer cure after amputation of the breast.

In view of these facts, it is interesting to inquire what would become of the 40 per cent. of reported recoveries after amputation of the breast by skilled operators, and the 10 to 20 per cent. of this 40 per cent., free from recurrence after three years, could we have eliminated from the records the cases that were non-malignant, those that would not have taken on malignant activity, and the smaller percentage that might have spontaneously disappeared by the natural process of body resistance? An unbiased consideration of these elements of error in our scientific data, at present indeterminate, and possibly indeterminable, leads to the pessimistic conclusion that tumors of the breast, having once taken on malignant degenerative action, are never, or rarely cured by any operation whatsoever.

Here permit me a word regarding the classical three-year period, after which, there being no return, patients are considered cured. As such they swell statistics as operative triumphs in cancer cure. The professional world has, I believe, quite generally adopted Professor Volkmann's teaching, that patients three years after operation with no return, are to be regarded as cured. Now as we are considering statistics of cancer after operation with reference to accuracy as a basis of final judgment and scientific knowledge, it behooves us to define accurately our meaning of "cure." If by cure, we mean a definite eradication of a disease, leaving the organism in a healthy state, we clearly misuse and strangely pervert its meaning. It is sheer sophistry or juggling to apply the term "cure" to the mere arrest, or temporary disappearance of a morbid process, and unlimited audacity to consider the results of the operation as *post hoc*—a necessary anatomic sequence. It is known that the surgical records are replete with numberless examples of recurrence of cancer in the bones,

1. Wells, H. Gideon: The Resistance of the Body to Cancer, THE JOURNAL A. M. A., May 29, 1909, p. 1731.

tissues and viscera, five, ten, fifteen and more years following radical operations, and here we are again confronted by an undeniable source of error in our surgical statistics.

The vagaries in the evolution of tumors diagnosed as malignant that have transpired under my observation will illustrate the points I desire to make.

CASE 1.—The patient is the mother of four children; of German extraction; of excellent habits and family history; has never been ill. Twenty-five years ago she consulted me for a tumor occupying the upper and outer quadrant of the left breast, in mass equal to a small egg, irregular in outline and movable. Her attention was attracted to the tumor by pain, which she described as lancinating and severe. She did not know how long it had existed. Her age, the density of the growth, its situation, and the pain led me to advise its immediate removal. She positively declined operation, and in order to convince her of the importance of its removal and the danger she incurred by delay, I advised her to seek other advice, and she consulted four eminent surgeons of this city, who all advised immediate removal of the growth, assuring her meanwhile of its malignant nature. She declined operation and returned to me for further assistance. I had her support the breast by adhesive straps, as it was rather large, and dismissed her. Within the following year the tumor had disappeared. Eleven years after this event, she applied to me for the repair of a lacerated cervix. The operation was done at St. Mary's Hospital with perfect results and the patient was again dismissed, her health being most satisfactory in every respect. Five years elapsed and she again consulted me for uterine hemorrhage, which she said had continued the past year. On examination I found extensive carcinoma of the uterine cervix and body, with infiltration of the vesicovaginal and rectovaginal walls, with no recurrence of tumor of the breast.

CASE 2.—The patient was a nullipara, aged 42; married; menstruation normal; family history of cancer and insanity. The patient had consulted me nine years ago for a tumor of the breast. The growth was hard, irregular and occupied the axillary and upper quadrant. An older sister died a year before, after an operation for a growth of the neck, said to have been sarcoma. The gross appearance of the tumor was, to me, unequivocally malignant and I earnestly advised its immediate removal, and gave among my reasons her unfortunate family history. She declined surgical interference. She remained in the city under my observation for two years with no new developments in the growth. It is now seven years since I first saw her. She is living in Orange, N. J., from which place she writes, July 17, 1910, as follows: "The breast tumor disappeared entirely some years ago. There has been no return in that place or elsewhere, consequently there has been no necessity to consult any other physician, and my general health has been good."

CASE 3.—The patient was a woman, aged 48; mother of four children; five years ago she discovered a tumor of the left breast. Four of the most eminent surgeons of San Francisco saw her in consultation. The diagnosis of carcinoma was unanimous, in which opinion the husband, a physician, joined. It was decided to take her abroad for further advice. En route the breast suppurated and the non-malignant character of the lesion was established. No operation was done and the patient is living and well.

CASE 4.—The patient, a woman, aged 44, nullipara, married, gives a history of cancer on the paternal side, two having died of cancer of the breast and one of cancer of the stomach. Eight years ago she consulted me respecting a hard, irregular growth in the upper and outer segment of the mamma, about ¾ of an inch from the nipple. She had consulted two prominent surgeons, who had informed her that the growth was undoubtedly malignant and advised her to have it removed without a moment's delay. The nipple, she informed me, had been sensitive for two years and after the discovery of the growth, she has experienced lancinating pain radiating toward the axilla. At the time of my examination she was extremely nervous, much depressed and begged me to defer operation until she could be somewhat restored to health. With doubts and some qualms of conscience, I gave her tonics and sent her to the country, supported and strapped the breast. She improved steadily during these months. The tumor appeared to soften and diminish in size; within a year it had entirely disappeared and in August, 1910, eight years from the discovery of the growth, her health was perfect and the breast normal.

CASE 5.—The patient was a married woman, aged 40, rather stout, with large pendulous breasts; the mother of one child. Two months before she discovered a small, hard, irregular nodule in the left breast. I found a small, hard, irregular tumor, deep-seated and perfectly movable. She complained of pain and was very nervous about it. The right breast had a similar development. I gave a guarded opinion but advised its removal, which she declined. She subsequently consulted a number of well-known surgeons, all of whom gave guarded opinions, but advised removal. She finally returned to me for operation, limiting the procedure to removal of the tumor. I removed the growth by a wide incision and closed the wound. I submit herewith the pathologic findings of Professor Ophüls of Cooper College:

"Small, hard, badly defined nodule in the fatty tissue near the mammary gland. Sections show that the tumor consists largely of bundles of large spindle cells with connective tissue fibers between them. There are also many very large multinuclear giant cells with central arrangement of nuclei. The tumor infiltrates the fatty tissue diffusely. In the fatty tissue about the tumor the oil in many places is changed into fatty acids, with formation of large partly multinuclear phagocytes at the edge of the crystals. Around the tumor there is some new formation of dense fibrous tissue with little cellular infiltration which is quite marked around one of the ducts of the mammary gland. No arterial disease. Diagnosis is: giant-celled sarcoma of mamma."

Four and a half years have elapsed since the operation and there has been no new development in either breast, nor other unfavorable change in the patient's health.

CASE 6.—Mrs. P. of Morgan City, Utah, aged 50, multipara, came to San Francisco for removal of both breasts for tumors, diagnosed as cancer. Small, hard, movable nodules in both glands were well surrounded by fatty tissue. Family history was good; no history of tuberculosis or cancer in the family. The patient's general condition was fairly good, but she was somewhat depressed and nervous from anxiety. I regarded the tumors as benign and advised her returning home. I am in receipt of a letter from her husband under date of June 15, 1910, announcing the gradual reduction in the size of the tumors during the last year, great improvement in health and the absence of pain. The diagnosis of malignancy had been given by four reputable physicians in this case and removal advised.

CASE 7.—Miss P, aged 26, in excellent health was sent to St. Mary's Hospital twelve years ago for removal of both breasts for malignancy. They were apparently adenomata and I sent her home with instructions to report to the hospital at once should any new or unfavorable symptoms arise. She made no report during the four subsequent years of my service.

CASE 8.—The patient, aged 58, married, nullipara, had always enjoyed good health; there was no history of cancer or tuberculosis in the family. A year ago (1910) she discovered a tumor in the right breast. It occupied the upper and outer quadrant; it was freely movable; size 5 by 2.5 cm. It occupied the outer border of the mamma and I think it was an aggregation of the small lobules in that location. There was a small, rather hard elevation at the outer extremity of the tumor, over which the skin was slightly retracted. After the discovery of the growth she had some pain. In these cases pain almost never precedes the discovery of the tumor. The patient's family physician advised immediate removal of the growth, which she declined. I gave her a guarded opinion and began treatment by strongly strapping the breast to the chest walls, first applying mercurial ointment, camphor and

stramonium, and internally, 5 gr. potassium iodid daily. Within a month prior to this report the tumor had become softer, the indurated lump was disappearing and the mass had greatly diminished in size; she had no pain. Within a few months the tumor will be, I think, indistinguishable from the gland substance proper.

The foregoing recital fairly illustrates the points I wish to make, viz.:

1. A certain percentage of tumors diagnosed as malignant spontaneously disappear if not operated on.

2. These tumors when removed are classified as malignant and enter into the statistics of recoveries after operation for cancer, thereby largely augmenting the record and invalidating its scientific value.

3. The accepted percentage of tumors of the breast, classified as malignant, is too high.

4. In exceptional cases a tumor microscopically malignant does not take on malignant activity.

There are certain facts in the biology of tumor growths that afford a substantial basis for believing that malignant tumors exceptionally disappear by a process of spontaneous healing. This may appear from a practical point of view, like a futile discussion of a pathologic anomaly. It is, however, a theme of the highest scientific significance, and should stimulate pathologists and physiologists to a more thorough investigation of the processes by which the body defends itself against disease, and, if possible, to imitate, supplement or increase these natural defenses.

Dr. W. S. Handley,[2] Hunterian Professor of Surgery at the Royal College of Surgeons, in an interesting paper on "The Natural Cure for Cancer," says that in the literature of cancer are a number of scattered observations of cases showing that under certain circumstances the disappearance of cancerous masses of macroscopic size may occur spontaneously. These facts have appeared strange and anomalous to the authors who have recorded them, and their possible significance in regard to the cure of cancer is difficult to overestimate. Professor Handley postulates the following in explanation of the phenomena and as a law of cancerous growth:

> Every aggregation of cancerous cells has a definite life-cycle, and after a varying period, and a varying rate, tends to undergo degeneration and fibrotic changes. These changes extend from the center of the mass centrifugally to its periphery, lead to its shrinkage, and terminate in the replacement of the cancer cells by a fibrous scar. The natural cure for cancer is, therefore, a local and not a constitutional process.

In this connection Dr. Handley suggests the probability that certain chronic ulcers of the stomach accompanied by great fibroid thickening are really extinct carcinomata, and that for every cancer which reaches its full clinical development even as atrophic scirrhus, it may be that a hundred are strangulated in the process of birth and while still in the microscopic stage.

A feature of much interest in the natural process of defense against carcinoma is the microscopic evidence of perilymphatic fibrosis, in which the permeation of a lymphatic is normally followed by a certain process of fibrosis. The cancer cells which at first fill the lymphatic without distending it, by their continued proliferation finally burst the tube of endothelium within which they are enclosed. Around the lymphatic some extravasation of blood usually takes place and a dense aggregation of lymphocytes appears. Soon the lymphocytes are replaced by young fibrous tissue which forms an adventitious sheath for the cylinder of cancer cells set free from the bursted lymphatic. This newly formed fibrous tissue contracts on the newly formed cancer-cells and they ultimately entirely disappear. The original lymphatic is now represented by a solid thread of fibrous tissue and the process of natural cure is locally complete.

Admitting the probable exaggeration of reported recoveries after operation for cancer of the female breast by reason of mistaken diagnoses, the fact remains that tumors of the breast present a perplexing problem to the conscientious surgeon. A large percentage of tumors of the breast are malignant; a certain smaller percentage of the border-line or non-malignant group, e. g., the various forms and combinations of adenoma, cysts and those classified as chronic mastitis or involution tumors, tuberculosis and retromammary lipoma, hydatid and gumma, are subject to possible malignant degeneration. Therefore it has justly come to pass that all tumors of the female breast are to be regarded with suspicion. But shall every breast tumor that comes to the surgeon be subjected to a radical or mutilating operation? If not, what clinical findings should guide the surgeon in dealing with neoplasms?

We might reasonably indulge the hope that out of the vast storehouse of knowledge, statistics and surgical experiences, we should be able to unite on some fundamental principle as a basis of procedure in breast cases. In looking over a large field of surgical literature on cancer of the breast, I find some well-defined suggestions from the pen of Dr. Charles L. Gibson,[3] of New York. He holds that true cancer of the breast is rarely seen in young women under 25, and that in the absence of important clinical features breast tumors may be held to be innocent,and even up to 30 the indications are not urgent. Past 30 we should be more vigilant and aggressive. Past 35 we should assure ourselves on an anatomic basis of the nature of the tumor and in most cases forestall future changes for the worse. Forty and over is the definite carcinomatous stage, and at this stage not a single chance should be taken. In women up to 30 the diagnosis may be made on the clinical findings; past that age the opinions should be based on anatomic examination. Mutilating or disfiguring operations should be avoided unless unequivocally necessary.

By the consensus of medical opinion at this time, 85 per cent. of breast tumors are actually or potentially malignant, and the remaining 15 per cent. are liable at some indeterminate period to take on malignant activity.

The corollary is, therefore, that few tumors of the breast are essentially or inherently benign; those admittedly so are so rare as to be practically negligible. Hence the surgeon when confronted with tumors of the mammæ should not temporize. It is mandatory that he should remove, or advise removal of, all breast neoplasms. This decision of medical judgment is the law as it now stands, and it is eminently proper that we take the public into our confidence.

The remaining question then is as to method. Should transitional, border-line or presently-to-be-malignant neoplasms be treated by the radical method?

It is my impression and belief—not, however, demonstrable by statistics—that the major number of breast amputations, here and elsewhere, are made by the radical method, and this too, irrespective of malignancy, relative or transitional. Plastic operations are rare or ignored; radical removal is the vogue, and for reasons not justified by the pathologic findings in many instances. A large number of breast tumors, for example, the fibro-

2. Handley, W. S.: Brit. Med. Jour., March, 1909.

3. Gibson, Charles L.: The Rational Treatment of Non-Malignant and Border-Line Tumors of the Breast, Ann. Surg., xlix, 478.

epithelial type, the fibro-adenoma, the intracanalicular myxoma, and the multiple tumors in older women, and single and multiple cysts, can be safely removed and yet preserve the symmetry and cosmetic relation of the mammæ.

The unreasonable preponderance of radical methods is due, in my opinion, to exaggerated apprehension of actual malignant activity, undetermined pathology, and in part to surgical enthusiasm, amounting almost to surgical furor, that has swept over this country for the past decade, desolating thousands of lives by unnecessary and ill-timed surgical procedures, especially those of the abdominal cavity, where also great triumphs have been achieved, so perfect in technic and so beneficent in results as almost to blind us to the darker aspect of the picture. And here permit me to say, at the imminent peril of incurring denunciation as ultraconservative and hypercritical, that there is surgical license based on high attainment, knowledge of fundamental principles, adequate training and apprenticeship under competent masters that lightens the saddest burdens of mankind, and illuminates the world. There is also another sort of license of which we see and hear too much, the ill-timed and unnecessary surgery having relevancy rather to the interests of the practitioner than to the welfare of the patient. The apology for this license is to gain experience, to learn by practice, to become skilful by the lesson of blunders.

Such missionaries, if the word is not a misnomer, have been incontinently thrust forth on a reluctant and long-suffering world. Without training or adequate apprenticeship, they spring Minerva-like, full-formed and perfect from the head of Jove.

The operator who invariably selects radical methods for the removal of fibrocysts, fibro-adenoma and non-active tumors of the mammæ, who in the process of a curettement gets two feet of ileum into the vagina, who removes the uterus and its appendages for a cyst of the ovary and incidentally omits to inform the patient that she is unsexed, does a sort of surgery that has no place save one, which is graphically described and geographically located by the immortal Dante in his Divine Comedy—a place, I may remark, that is found neither on the earth nor in heaven.

Bloodgood, of Baltimore, in a recent paper on this subject, advises resection of the breast in chronic mastitis, fibro-epithelial tumors, adenoma and multiple cystic tumors, and in the breast tumors generally of young women.

In conclusion I wish to emphasize my position as to the radical operation in carcinoma. It is mandatory, without exception, but disfiguring operations should be avoided, unless unequivocally necessary. The procedure which most appeals to me in dealing with benign or relatively benign tumors of the breast is the plastic resection of Dr. J. C. Warren and Dr. W. L. Rodman. These methods, or some modification of them, I have practiced for many years with results most satisfactory to my patients and myself.

Case 1 presents some points of interest to which I invite attention, viz.: Was the primary tumor of the breast carcinoma and was its disappearance an example of healing by natural process? Had the tumor been removed in the first instance would there have been carcinoma of the uterus? Was the uterine carcinoma after sixteen years the result of potential cancer elements, held in check by natural body resistance during the vigorous period of life and developing only at the menopause, when body resistance was lowered, or was the uterine carcinoma a development *de novo?*

Case 2 is one of exceptional interest—the disappearance of a tumor presenting gross symptoms of malignancy in a person of the carcinomatous age, with a family history of cancer.

Case 4 is likewise of equal interest. The tumor had gross characteristics of malignancy, the patient was at the carcinomatous age and the family history was strikingly unfavorable.

240 Stockton Street.

EXPERIENCES WITH SALT RESTRICTION IN NEPHRITIC EDEMA

ALFRED C. CROFTAN, M.D.
CHICAGO

SALT EQUILIBRIUM

The sodium chlorid in the body fluids is normally maintained at a constant level. Below and above this level normal function becomes perverted. Hence the body tenaciously retains a definite percentage of sodium chlorid and reacts by an exaggerated elimination when its intake is increased, by a depression and finally a complete cessation of its output when the intake is decreased. So long as the means of output remain competent salt accumulation is merely temporary. About 2 gm. of sodium chlorid per diem suffice to maintain salt equilibrium and this amount at least must daily be added to the diet. Sodium chlorid in this respect occupies a peculiar position in our dietary, inasmuch as it is the only mineral constituent of the food that must be artificially supplied.[1]

SALT ELIMINATION

The elimination of sodium chlorid is chiefly a function of the kidneys. Some sodium chlorid is eliminated by the skin, the lacrimal glands, the stomach and the intestine, but in relatively insignificant amounts. The chlorid concentration of the stomach rarely exceeds that of the serum. The feces, even in profuse, vicarious diarrhea, incorporate only a few grams of sodium chlorid per diem.

The exact mechanism of sodium chlorid excretion by the kidneys is still a matter of controversy. The glomeruli by a process of filtration and diffusion excrete chiefly water and salt, the resulting liquid possessing the same percentage composition of filterable constituents as the blood-serum. In so far as the urine is normally more concentrated in these constituents than the serum, a corollary to this conception is partial reabsorption of water and salt in the tubular region of the kidneys, i. e., a secondary concentration, the rate of this secondary reabsorption being a function of the concentration of the fluid leaving the glomeruli as well as of the rate of its flow, in the sense that the more concentrated the fluid and the slower its flow the greater the reabsorption of chlorids in the tubular region. This is one of the factors that favor salt retention in nephritis.

1. While carnivorous animals and peoples require no salt, even dislike it, herbivorous animals and vegetarians cannot endure without it and prize it highly. Omnivorous creatures, occupying a middle position, require it. The food of both herbivora and carnivora contains a sufficient quantity of sodium chlorid, a vegetarian diet, however, containing more potassium salts than a meat diet. This excess of potassium drives out some of the sodium from its connections in the body, and hence the latter must be replaced. There is an interesting exception, which merely confirms this rule, in the case of rice-eaters, who do not require the addition of sodium chlorid to their diet; but rice contains scarcely one-sixth as much potassium as any of the other cereals.

PERVERSION OF SALT EXCRETION IN NEPHRITIS

There is no constancy or uniformity in regard to the perversion of the salt excretion according to the type of nephritis or the region of the kidneys involved.

Four possibilities must be thought of in nephritis, viz: The salt excretion equals the intake; the salt excretion is retarded but not reduced; the salt excretion exceeds the intake, or it falls below it.

In many cases of nephritis, especially during the stage of good diuresis, the salt output parallels the salt intake. Retardation, however, is much more common. For, whereas a normal subject gets rid of all the sodium chlorid ingested within twenty-four or forty-eight hours, most nephritics require several days to accomplish the same result. The study of a single day's chlorid excretion, even when carefully compared with the intake, is, therefore, of very little value, particularly as fluctuations in the daily output of sodium chlorid are especially characteristic of nephritis.

When in nephritis the salt excretion is found to exceed the salt intake, this invariably indicates preceding retention of sodium chlorid. It is, of course, also witnessed in normal persons fasting or on a salt-free diet, as well as after the use of bromids and large doses of potassium salts, the bromin ions having the power of driving out the chlorin ions, and the potassium, the sodium ions from their combinations.[1]

When the urinary salt output is smaller than the salt intake, we are, as a rule, dealing with renal inadequacy.[2] This is readily demonstrated by the fact that in unilateral kidney disease the sick kidney eliminates less sodium chlorid than the healthy one. The addition of sodium chlorid to the diet as a test does not cause a corresponding increase of the sodium chlorid excretion, as in a normal subject; often, in fact, the excretion will become still further diminished thereby. There occurs, therefore, a true salt retention, particularly in acute nephritis at the height of the disease, in severe parenchymatous nephritis, in heart disease kidney, especially during the stage of decompensation, and in nearly all forms of glomerular nephritis.

SALT RETENTION AND EDEMA

Salt retention is, as a rule, accompanied by edema, and when the proper elimination of sodium chlorid becomes reestablished the edema decreases correspondingly. It is sometimes difficult to determine whether the salt retention precedes the water retention, or vice versa. For one can as readily postulate that water is primarily retained as the result of renal insufficiency, circulatory weakness, or increased toxic permeability of the capillaries, and that a certain amount of sodium chlorid is secondarily retained in order to bring all the fluids up to the required concentration, as that salt is primarily retained as the result of renal insufficiency and that enough water is secondarily held back to maintain the proper osmotic solution.

Simple salt retention does not, however, explain all cases of nephritic edema and certain toxic factors no doubt play a rôle (chiefly, however, in determining the localization of the edemas). They become operative presumably by causing localized toxic permeability of blood-vessels, for we see quite similar phenomena in certain infectious diseases not associated with nephritis, especially in croupous pneumonia and in peritoneal tuberculosis, in the toxemia of gastric carcinoma and after certain drugs, as morphin and potassium iodid.

2. Other disorders are mentioned further on.

RATIONALE OF SALT RESTRICTION

Whenever nephritic edema is due to salt retention, then a reduction of the salt intake becomes a rational procedure; it is certainly less irrational than to attempt forced elimination of sodium chlorid through sick kidneys by drugs, when the kidneys have spontaneously manifested their inability to perform this function properly. Vicarious elimination, spontaneous or induced, is, as a rule, inadequate and also constitutes a rather forcible method of procedure that violates the principle of sparing already overtaxed or weakened organs rather than driving them.

As a matter of fact, in proper cases, a diet poor in sodium chlorid aids immensely in the rapid elimination of retained sodium chlorid and of water, generally causing a decrease of the edema.

CHLORURE FIXÉ AND CHLORURE LIBRE

The renewed excretion of sodium chlorid and water does not, however, always run in a parallel way. One must assume with Maries that a certain amount of the retained sodium chlorid becomes attached to the cell protoplasm in solid combination. This is the first event when the kidneys become inadequate; here we witness salt retention without edema. As soon as these affinities are saturated, sodium chlorid is forced into the circulation in excessive quantities, water must be retained to form the proper solution and we witness edema.

Following salt restriction, then, the circulating chlorin (*chlorure libre*), with a corresponding amount of water, is first eliminated in a broad stream with resulting rapid decrease of the edema. The elimination of the attached chlorin (*chlorure fixé*) occurs much more slowly and is accompanied by a much smaller outpouring of water. At this stage the addition of even small quantities of sodium chlorid to the diet may cause prompt reappearance of edema as the cell capacity for retaining surplus sodium chlorid is already overtaxed.

SALT RESTRICTION AND POLYCHLORURIA

A most difficult phenomenon to explain is the effect of chlorid restriction to produce an increased excretion of urinary chlorids. The idea of rest to the kidneys must be thought of first. It is known that they excrete sodium chlorid with difficulty when they are diseased. By restricting the chlorids of the diet the kidneys are therefore spared, have an opportunity to recover their impaired function and to resume normal chlorid excretion until the body is finally rid of the surplus salt and water. Besides, as we have seen, the chlorid excretion in most cases of nephritis is not really absolutely reduced, but merely retarded; consequently, if only enough time is given and no excess of sodium chlorid is administered, the kidneys will gradually get rid of the surplus until normal concentrations are reestablished. Here the interesting relations of fixed and free chlorids, the peculiar balance occurring between glomerular excretion and tubular reabsorption mentioned above must all be thought of.

EFFECTS OF EXCESSIVE SALT RESTRICTION

Occasionally we see the paradoxical phenomenon of an increase or a reappearance of edemas when the salt restriction is carried too far. This is due to loss or insufficiency of the power of the kidneys automatically to dilute and concentrate the urine; for when this power of adjusting the water output to the chlorid excretion becomes insufficient, as in some forms of nephritis, then

the kidneys may, for instance, excrete 3 gm. of sodium chlorid with only 400 c.c. of water instead of accompanying this excretion of 3 gm. with the outpouring of about 900 c.c. of water ordinarily required; in other words, a certain amount of water, which would ordinarily be excreted, is retained and the edemas increase accordingly.

SALT RESTRICTION AND WATER EVAPORATION

Still another factor that operates to reduce edemas when salt is restricted must be considered, viz., the greater facility of water evaporation from the lungs and the surfaces of the skin when concentration of the body fluids becomes reduced. In this way enormous quantities of water may be eliminated. Profuse sweating, in fact, frequently follows salt restriction in patients suffering from nephritic edema.

TOLERANCE DETERMINATIONS FOR SALT

As a preliminary to chlorid restriction a tolerance determination for chlorids should be made, in order to determine whether or not there is actual retention of chlorids or merely retardation in their output, or whether the organism is in chlorid equilibrium and capable of getting rid of an ordinary chlorid ration.

Such a tolerance test is simple, if the chlorid contents of the diet are looked up in appropriate tables,[3] and if the salt addition to the diet is weighed and a chlorid determination of the twenty-four-hours' urine is made for several successive days. The technic of a urinary chlorid determination is simple with the aid of a little apparatus constructed on the principle of the Esbach albuminometer.[3] One should also, of course, be guided in instituting salt restriction by the amount of urinary water, compared with the liquid intake, by fluctuations of the weight of the patient and of the edema.

As a rule, a partial restriction of the chlorid intake to about 2.5 to 4 gm. is sufficient to produce the desired result, while at the same time no particular hardship is thereby imposed on the patient, nor is his appetite materially impaired. To simply say, "stop all table salt," is the crudest routine and often so difficult for the patient to carry out that it cannot be enforced. The preparation of a salt-free bill of fare, or a dietary containing little salt, is an art. There are several monographs on this subject which can be consulted.[3]

SALT RESTRICTION AND DRINK RESTRICTION

In very acute forms of nephritic edema salt restriction is fitly combined with drink restriction. Here the results are usually brilliant, especially as far as the edemas are concerned. One should not be afraid of scanty urine. I often remain content with 8 to 12 ounces each twenty-four hours for many days or weeks, provided the liquid intake is kept below 20 ounces and provided the diet is low in salt and nitrogen. So far I have never seen an accident of a uremic character, in fact, have occasionally seen uremic headache, pulmonary edema and uremic asthma disappear. A drinking day occasionally, or a salt day, singly or combined, is a useful means of testing the renal capacity and the degree of retention of chlorids, or of retardation in their excretion. A very rapid loss of weight is, of course, to be expected, and I have found it valuable to warn patients of this; it usually frightens them, because they do not understand that it is due to the loss of water. The patient should be weighed at frequent intervals, for this is a valuable means of control, a gain of a pound or two in twelve or twenty-four hours usually indicating renewed salt and water retention and calling for appropriate restrictions.

PERSISTENCE IN SALT RESTRICTION

The greatest persistence in carrying out salt restriction is desirable. A few days' trial is generally useless, for so short a period does not suffice to spare the kidneys and to give them an opportunity to regain their function. One often sees no result for a week or two, particularly in the more chronic forms of nephritis. Occasionally even salt restriction, for reasons indicated above, produces a temporary increase of the edema and a transitory retention greater than before. Then sometimes quickly, more often, however, gradually, an increased excretion of chlorids begins to be noticed and therewith a rapid decrease in the edema. It is astounding what enormous quantities of chlorids the kidneys can often get rid of after the reexcretion of chlorids has once been fairly inaugurated. I have seen, with a daily intake of 2 or 3 gm. of sodium chlorid as much as 200 to 250 gm. of sodium chlorid excreted within two weeks.

SALT RESTRICTION AND DIURESIS

The process of salt elimination can occasionally be inaugurated by the judicious use of diuretics, of which theocin is probably one of the best, given in 3- or 4-grain doses, three or four times a day. As a rule, however, one can get along very well without the use of diuretics, although most of the patients that I see have been through an energetic course of this kind; the object of this therapy being to rid the body of water and salts by forcing them through the kidneys; a procedure that, as shown above, is altogether irrational.

RESUMPTION OF SALT FEEDING

The resumption of sodium chlorid feeding should be very gradual, even after the edemas disappear and the sodium output equals the intake. One should stay near the requisite minimal 2 gm. per diem ration as long as possible and should control the balance between intake and output carefully. One should proceed here as gradually and as carefully as in the resumption of starches and sugars after the use of a carbohydrate-free diet in diabetes mellitus.

OTHER USES OF SALT RESTRICTION

That salt restriction has other fields of usefulness, I merely mention. In diabetes insipidus it sometimes helps, but not always. It is worth trying by all means, for in diabetes insipidus the power of producing a urine of sufficient concentration is lost. When the organism becomes overloaded with chlorids, the excessive water elimination is increased. Chlorid restriction at all events helps reduce the thirst, so that in diabetes insipidus, as well as in many other conditions in which drink restriction is indicated (obesity, certain cardiac and cardiovascular disorders, etc.), a salt-free diet facilitates this therapy.

In certain other states, finally, salt restriction is of the greatest value, namely, (1) in the treatment of inflammatory exudates, especially involving the serous membranes; (2) in certain stages of croupous pneumonia; (3) in any disorder in which it is desired to produce a bromid effect; especially, therefore, in epilepsy. It appears, as indicated above, that a part of the bromin effect is due to its power to replace chlorin. The action of bromids can therefore be strengthened by restricting the chlorid intake, and very much less bromid will be

3. Croftan, A. C.: Clinical Therapeutics, Ed. 4; Strauss, H.: Praktische Winke für die Chlorarme Ernährung, Berlin, 1910.

required to produce any desired result. Salt, on the other hand, may be considered an antidote against bromidism and should be so employed. Epileptic attacks can sometimes be produced by large doses of salt in cases otherwise controlled by bromids.

LIMITATIONS OF SALT RESTRICTION

So simple a measure as the regulation of the table salt intake may assume, therefore, the dignity of a fundamentally important therapeutic inroad. Again empiricism has pointed the way and full scientific explanation must come a little later. In view of the occasionally brilliant results that have been obtained; in view of the apparently simple (and correspondingly incomplete and inaccurate) explanations that have been offered, enthusiasm has gone somewhat beyond bounds in regard to salt restriction as a therapeutic measure. It is by no means a panacea for all nephritic edemas. With careful selection of types and with methodic regulation and control, salt restriction can probably never do harm and will usually do good; but employed as a routine measure without control, promiscuously, in every case of edema, it will more often disappoint than fulfil the expectations based on it.

32 North State Street.

UP-TO-DATE METHODS OF ANESTHESIA*

JAMES T. GWATHMEY, M.D.
NEW YORK

Modernizing an old house is a much more difficult procedure than building a new one. Similarly, it is more difficult to correct misinformation than to inculcate sound principles from the beginning. The more difficult task, however, is before me.

THE AMPHITHEATER

It may not be going too far afield to say that an up-to-date anesthesia should be given in an up-to-date amphitheater. This gives me an opportunity to air certain phases of the life of a surgeon and anesthetist and incidentally the life of each patient that comes under their care. I refer now to the poorly ventilated operating-rooms existing in the most modern hospitals. In not a single operating-room that I know of is the air changed and rendered livable. The air should be forced in near the ceiling through gauze and should be drawn off near the floor, in this way giving a constant supply of fresh air and, of course, at the same temperature. An electric fan merely sets in motion the impure air in the room and does not purify it. In addition to having the walls and ceiling wiped down with a weak bichlorid solution, the floor, regardless of its composition, should always be cleaned with oiled sawdust, or something having a weak solution of oil in it so that any particles of dust dropped by the surgeons, assistants and nurses from their clothes and shoes will remain under foot.

THE PSYCHIC ELEMENT

Crile,[1] in a recent paper, has attempted to show that there is a physical basis existing in the brain that accounts for the element of fear in some patients as regards the operation, and that therefore preliminary medication is an absolute essential of every up-to-date anesthesia. I have long been the advocate of modified physiologic doses of morphin, chloretone or other drugs to allay fear and prevent the psychic element from being in evidence in the slightest degree. The patients take the anesthetic more kindly and require less of it, and do not demand immediate attention after the operation, being in a quiet state and suffering neither mental anxiety nor physical pain. On the other hand, some of the best-known surgeons in the United States absolutely ignore the fact that such a thing as fear exists, not realizing the responsibility of such a position.

OBJECTIONS TO THE USE OF MORPHIN

Bevan[2] agrees with his anesthetist, Dr. Isabella Herb,[3] that "drugging," as they term giving small physiologic doses of morphin, "is objectionable in that it delays reflex excitability of the air-passages, retards coughing, favors the retention of aspirated blood or vomitus in the trachea." Bevan also states that "many people are not able to take morphin without distress and with such individuals the disagreeable after-effects of ether would be aggravating" . . . ; that "it masks the most valuable guide in anesthesia, the pupillary reaction." As morphin is given as a routine thing in suitable doses by men who use spinal, local and rectal anesthesia, and by all who use nitrous oxid and oxygen anesthesia, the objections, as stated by Bevan and his anesthetist, could apply only to the two pulmonary anesthetics, ether and chloroform, and possibly ethyl chlorid.

The eye is never touched or looked at under nitrous oxid and oxygen anesthesia and a great majority of anesthetists to-day rely on the respiration and the maintenance of an open air-way as the principal guides. In addition to these we have the pulse, color and lid reflex, rarely observing the pupil, much less relying on it. It is hardly fair for Bevan and his anesthetist to ask us to relinquish the use of morphin on account of the pupil.

Another reason which they give for refusing to use this drug is, in my opinion, the strongest argument for the use of it, as illustrated by the well-known therapeutic fact that "one drug will augment the action of another." An overdose of the anesthetic is not more possible with morphin than without it by one who knows what he is doing. Bevan asserts: "In case of any untoward accident there is not only the volatile and quickly removable drug but also the non-volatile and comparatively permanent one to be eliminated." Again this is a sound argument in favor of using morphin as a preliminary. The volatile and quickly removable drug is gradually withdrawn toward the close of every operation, leaving the patient in a quiet, pain-free state. The small physiologic dose that we prescribe helps to prevent shock, but never masks it entirely. When this occurs in an operation the anesthetist eases up on the volatile anesthetic, and the patient is in better fighting attitude to resist the shock than if he were wholly under ether or chloroform.

The other objections of Bevan, in regard to retarding cough and favoring the retention of aspirated blood and vomitus in the trachea, etc., taken with other parts of his article, are sufficient internal evidence that his mind still lingers in an age that should be past as regards anesthetics. Dr. Isabella Herb's article[3] has an illustration of a strap which is used in insane asylums for

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* Read before the Practitioners Club of Jersey City, Dec. 12, 1911.

1. Crile, George W.: Newer Methods for Further Increasing the Safety of Surgical Operations, THE JOURNAL A. M. A., Dec. 2, 1911, p. 1811.

2. Bevan, Arthur Dean: The Choice of the Anesthetic, THE JOURNAL A. M. A., Dec. 2, 1911, p. 1821.

3. Herb, Isabella C.: Administration of General Anesthetics with Special Reference to Ether and Chloroform, THE JOURNAL A. M. A., May 6, 1911, p. 1312.

restraining patients, also directions for cleansing the mouth of mucus, saliva, etc. The question is: Shall we use straps and, in a great number of cases, have the mucous râle in the throat of the patient during the operation and also the nausea afterward that always accompanies the mucous râle and in addition the mental suffering, or shall we have the patient come in a neutral state and take the anesthetic quietly, and during the operation not have the mucous râle and finally come out without nausea or vomiting at the end of the operation?

Collins[4] published the report of a series of over 1,000 cases in which he used morphin and scopolamin (hyoscin). The patients not only took the anesthetic quietly and easily, but in over 90 per cent. there was no nausea or distress following the operation.

The question immediately arises here, Shall we, like the devoted followers of popular cults, follow the teachings of our great surgeons blindly, or shall we separate the wheat from the chaff, the gold from the dross, analyzing and weighing every proposition, thus arriving at a correct conclusion?

ANESTHETICS

The Reason for Giving Preliminary Medication.—The principal objection to withholding preliminary medication from the patient about to undergo an operation is the mental suffering undergone at this time if the patient is not so treated. This may eventually come back to him at some future date and possibly prevent him from undergoing a necessary operation until the time limit has expired and nothing but palliative surgery is possible. All patients, except possibly those under 8 and over 80, or those in a state of coma, should have preliminary medication. As Collins says, it is much easier to anesthetize a patient half asleep than one with all reflexes in rebellion.

The Administration.—With our patient suitably prepared, we are now ready to administer the anesthetic. If we are to do this scientifically, while we should presumably have a general idea of what we are going to give, we should always be prepared to change or modify our anesthetic as the exigencies of the case demand. The objection to adhering strictly to some one anesthetic or method of administration is that it handicaps the anesthetist and places the patient at a disadvantage at once.

The First Death Under Nitrous Oxid and Oxygen.—This is strikingly illustrated by the first reported death under nitrous oxid and oxygen. Dr. Lydston,[5] of Chicago, reported this death with all attending circumstances and surroundings. Nitrous oxid and oxygen had been determined on as the anesthetic suitable for this special case. In less than ten minutes from the time the mask was applied the patient was dead. From the way the case was reported the anesthetist must have known in less than three minutes that this was an unsuitable case for nitrous oxid and oxygen and should have been prepared to switch. Numbers of deaths that have never been reported have occurred under nitrous oxid and oxygen anesthesia.

Nitrous Oxid and Oxygen Anesthesia.—This is not the innocuous anesthesia that manufacturers of gas and apparatus, and enthusiasts like Crile and Gatch, would have us to believe. One death occurred in Crile's clinic which, he says, he felt would not occur at the present time. Dr. Teter[6] reports a death which he does not think attributable to the anesthetic; two deaths are reported by Gatch,[7] at Johns Hopkins Hospital, neither of these attributable to the anesthetic and yet one of these patients had been successfully anesthetized a short period previously with ether. Crile, in his last article, wipes the one preventable death from his memory and states that no deaths have occurred in his clinic from nitrous oxid and oxygen anesthesia. I know of one professional anesthetist who had narcotized thousands of patients with ether and chloroform without a single death for a period extending over ten years, and less than one year after his taking up nitrous oxid and oxygen two deaths occurred in his professional family, presumably through no fault of the anesthetic or the anesthetist. Thus are statistics made. Far be it for me to decry the value or the increasing use of nitrous oxid and oxygen, but if we are to give an up-to-date anesthetic, should the patient show symptoms that his life is in constant danger from this method of anesthesia, we should give him the immediate benefit of some other method and some other anesthetic.

The Safest Time to Change to Nitrous Oxid.—The safest and best time during the course of an anesthesia to administer nitrous oxid and oxygen is at the close of the narcosis. It is an easy matter to follow up an ether administration with nitrous oxid and oxygen. The tissues of the human body are in such a condition at the close of an operation lasting one hour or more that if any untoward effects are to occur from the use of chloroform or ether they are apt to occur after this, and here is where nitrous oxid and oxygen should be introduced so quietly and carefully that the surgeon will not be aware of the substitution.

Nitrous Oxid-Ether Sequence.—The nitrous oxid-ether sequence is used supposedly in many hospitals to-day. These are a few rules by which the surgeon will know whether or not the nitrous oxid-ether sequence has been used:

1. The patient should be under the gas in less than two minutes.

2. When the ether is given there should be no struggling or hesitancy in any way as the change is made. If the stage of excitement is present in any degree whatever, faulty technic is somewhere responsible. When struggling occurs, what really happens is that the patient is given one or two bags of gas; but air is admitted at the same time through a faulty inhaler or between the inhaler and the face. The ether is now turned on with the consequent result that a tremendous flow of saliva is occasioned, which handicaps the anesthetist throughout the operation. The idea of the nitrous oxid-ether sequence is to prevent the second stage of excitement and the flow of saliva. In addition, it allows a reduction of the amount of ether used, and modifies the nausea and vomiting. If any of these things occur, the patient has not had the full benefit of the sequence. If the patient takes the nitrous oxid or nitrous oxid and oxygen quietly and easily, there is no reason why this should not be continued. If a greater degree of relaxation is required there is no good reason why a switch should not be made to ether, and then, if necessary, to chloroform.

Comparative Safety of Ether and Chloroform, and Nitrous Oxid and Oxygen.—As a broad general proposition, I wish to state that properly administered, an ether or chloroform anesthesia is as safe and also as free from after-effects as is a nitrous oxid and oxygen anesthesia.

4. Collins, C. U.: THE JOURNAL A. M. A., March 26, 1910, p. 1051.
5. Lydston: Med. Rec., Nov. 12, 1910, and Feb. 11, 1911.
6. Teter, Charles K.: THE JOURNAL A. M. A., Aug. 7, 1909, p. 448.
7. Gatch, W. D.: The Use of Rebreathing in the Administration of Anesthetics. THE JOURNAL A. M. A., Nov. 11, 1911, p. 1593.

METHODS OF ADMINISTRATION

The question arises: In what form shall we administer the anesthetic, by the cone, drop or vapor method? The cone method is acknowledged by all to be the worst possible anesthetic for the patient and yet this is still used in many hospitals.

The Drop Method.—The drop method has been strongly advocated by the Mayo brothers,[8] Murphy,[9] Bevan and other leading men. The article of Dr. Isabella Herb presents sufficient internal evidence for the discarding of this method. I use the drop method daily at some time during the anesthesia, but *not constantly.*

The Vapor Method.—The vapor with the warm attenuated moist air is so far superior to the drop method that it cannot be compared with it. The only anesthetic to which the vapor can be compared is the nitrous oxid and oxygen combination. I feel that the vapor method is so much safer than the nitrous oxid and oxygen that if I were to be anesthetized myself I would not hesitate to choose the vapor in preference to the other combination.

DUTIES OF THE ANESTHETIST

The anesthetist should have entire charge of the preliminary medication, as also of the medication during and after the operation, i. e., as far as it relates to the anesthetic. At the close of every operation the patient should have from 1 to 2 pints of warm saline with 1 ounce of glucose per rectum, to restore the glycogenic function of the liver and to relieve the thirst and fill out the veins; as the operation is closing or a little later, an enema of 3 to 6 ounces of warm olive oil should be given in order to restore the opsonic index.[10] With these precautions and additions not one patient in ten will have any nausea or vomiting, or any unpleasant recollections of the work of the surgeon and his assistants.

40 East Forty-First Street.

TACKS AND NAILS IN THE AIR-PASSAGES: BRONCHOSCOPY *

E. FLETCHER INGALS, M.D.
CHICAGO

From among a number of my unreported cases of bronchoscopy for foreign bodies in the air-passages, I have selected for consideration the histories of three, each of which possesses some features of unusual interest.

CASE 1.—A boy of about 14, whom I saw in 1910, was suspected of having drawn a tack into his air-passage eight weeks before he was brought to me. The mother informed me that the delay in seeking relief was due to the boy's precocious fear of death, which he thought might result from an operation. The history showed that this patient had suffered from hacking cough and almost daily fever since shortly after the accident, the temperature varying from 99.5 to 104.5 F., but there was no dyspnea and he complained of no pain. He had had a convulsion two days before I saw him, but the history gave no statement as to whether or not he had ever had any others.

Examination.—The temperature was running high every day, the respirations about 30, pulse varying from 102 to 132. The appetite was fair, bowels and urine normal. The hacking cough was attended by expectoration of a small quantity of tenacious mucus. Signs in nose and throat were negative. Liver and spleen were normal. Chest normal in form but some loss of movement on the right side. Heart's apex in natural position and giving normal sounds excepting slight systolic murmur, confined to apex. Physical signs over left lung normal. Over the right side, especially the lower part, the vocal fremitus was very weak. The vocal resonance was normal above the sixth rib but very much diminished below that. In front the pulmonary resonance was normal as low as the sixth rib when he was sitting, but only to the fifth when he was lying down. Immediately below these lines great dulness was found for ¾ inch, and flatness below that. This suggested that the pleural cavity was filled with fluid up to these lines; but it should be noted that the line of flatness was lower when he was sitting than when he was lying down, just the reverse of what should have occurred from the presence of fluid. Posteriorly, the line of flatness was found at the seventh interspace but it did not change when he lay on the left side. An occasional râle could be heard over the upper part of the right lung; but below the line of flatness there were neither râles, vesicular murmur nor bronchial breathing. The physical signs over the lower half of the right lung thus spoke first for pleuritic effusion, but the normal position of the apex of the heart and the raising of the line of flatness by placing the patient on his back, and the fact that this line did not change posteriorly or laterally when he was placed on the opposite side, was against this conclusion and indicated either extensive pleural adhesions or complete filling up of the air-passage in this portion of the lung, due to pulmonary collapse, extensive pneumonic consolidation or to secretions in the bronchi and air vesicles, or to these combined.

Operation.—A radiograph was taken which showed the shadow of an upholsterer's tack well down in the right main bronchus, with the point upward. After removal this tack measured 1.9 cm. in length and its brass head measured 9 mm. in diameter. Notwithstanding the high temperature, an operation appeared the only means of relief; therefore, he was given ether and a bronchoscope introduced. I found the right bronchus filled with granulations which had to be removed before I could get sight of the tack. The moment this tissue was disturbed bleeding occurred which obscured the field of vision and caused great delay from the necessity of swabbing away the blood. This is one of the greatest difficulties when granulomas are encountered in these cases, and one which occupies at least nine-tenths of the operator's time; for when the bleeding has been checked and the field of vision once more cleared, the next portion of the granulation tissue that is removed causes a repetition of the whole procedure; and this is likely to occur repeatedly before the foreign body can be seen, as it did in this case. After prolonged effort with numerous delays from the blood, occupying about an hour's time, I brought the tack into view and grasped it with a Killian forceps that had a very good grip. I withdrew it slowly, as the head was so large that it stuck quite firmly in the bronchus and even in the trachea. It was altogether too large to be drawn into the bronchoscope, which had to be withdrawn at the same time. When the tack was in the vicinity of the glottis, it slipped from the forceps and I searched for it again for half an hour, this time greatly hindered by the escape of large quantities of pus which had been set free by the displacement of the head of the tack which had acted as a perfect stopper. Finally, having had the patient an hour and a half under the anesthetic and discouraged from not again being able to see the tack, I slowly withdrew the bronchoscope and immediately afterward found the tack in the patient's mouth.

In another case of the same kind of foreign body, I had a similar experience with slipping of the forceps, prolonged search for the tack and finally as the bronchoscope was withdrawn it fell out on the floor. I cannot yet guess where these tacks were hidden previously.

I had this patient under the ether with the bronchoscope in the trachea for an hour and a half, which is, I think, much too long; but every minute I had hoped

8. Magaw, Alice: A Review of Over Fourteen Thousand Surgical Anesthesias, Surg., Gynec. and Obstet., December, 1906, p. 795.
9. Murphy, John B.: Practical Medical Series, 1911, xi, p. 33.
10. Ferguson, Robert H.: The Opsonic Index in Relation to Surgical Anesthesia, E. R. Squibb and Son.

* Read before the South Side Branch of the Chicago Medical Society, December, 1911.

would be the last and thus the flight of time was unheeded. The heart-breaking delays, the extreme anxiety for the patient and the knowledge that prolonged operations of this kind are dangerous, while failure may spell death for the patient, place the operator under such circumstances under an indescribable stress.

After such operations there is great danger from edema of the upper air-passages or even of the lungs, or of a fatal bronchitis or bronchopneumonia. I think these dangers are minimized by placing the patient in a croup tent for forty-eight hours and administering saline diaphoretics and diuretics in sufficient quantity to keep down the temperature.

Jackson has recommended also keeping the foot of the bed elevated for a day or two after the operation, and therefore I usually order this as an additional precaution.

Postoperative History.—After the operation this patient was given 10 grains acetate of potassium and 2 drams of solution of ammonium acetate every four hours for two days, when the temperature was found to be only 97 F. and then the dose was reduced to one-half this amount, but the temperature speedily rose to 103 and 104 F. during the next two days. The notes show that the full dose of the medicine was then resumed and the next day the pulse was 96 and the temperature 99.2 F., and within a few hours went down to normal where it remained for two days, although it subsequently went up to 100 F., at least once. For a few days after the operation the patient expectorated large quantities of mucopus; but it is noted that he was in good condition when discharged one week after the operation.

The patient remained well until nine months later when he caught cold, and afterward suffered considerable cough and expectoration for eight months, when he came to me again. I found a general bronchitis which did not wholly subside for five or six months.

This case illustrates the importance of early operation to avoid the formation of granulation tissue and the annoyance the latter causes; also, the unusual signs and the serious condition that may result from a foreign body. It shows the confusing conditions that an operator may have to contend with; the necessity for strong forceps that will not slip, the importance of careful management of the patient after the operation, and the value of some of the older therapeutic measures that are likely to be overlooked at the present day.

Case 2.—A boy, aged 6½ years, was brought to me this fall with a history of having drawn a tack into his air-passages seven months previously. Shortly afterward he had pneumonia with a temperature of about 104 F. for nine days. He then improved and felt much better for two weeks; but then became worse, ran a high temperature and was confined to bed for three months. Subsequently he had fever, often from 104 to 105 F. in the afternoon, almost daily, until he came to me.

Examination.—The patient was weak and pale with night sweats, poor appetite and constipation; weight only 37 pounds, whereas before the accident it had been 60. He had some cough and a whitish mucous expectoration especially in the forenoon. There was no apparent dyspnea on the slight exertion that he was able to take; but the pulse was 138 and the temperature 101 F. before noon and 105 in the afternoon. Signs in nose and throat were negative. Heart was normal in position, size, rhythm and sounds, but rapid. The right lung was normal. The whole of the left lung was consolidated, the lower two-thirds being impervious to air and but very little air entering the upper third.

First Operation.—A radiograph revealed an upholsterer's tack lodged in the upper part of the left main bronchus head down. After removal, this measured 1.9 cm. in length and the large brass head 9 mm. in diameter. Four hours before the operation the child was given hypodermically atropin sulphate gr. 1/300, and half an hour before ether was administered he received in the same way atropin sulphate gr. 1/300 and morphin sulphate gr. 1/18, for the purpose of checking secretion during the operation. As soon as the patient was well anesthetized, I introduced a bronchoscope but found the left bronchus closed by granulation tissue which completely hid the tack. Having a fair knowledge of its position, I pushed a forceps through the granulation tissue and grasped it, but it was held so firmly that the forceps soon slipped off. Immediately afterward, because the head of the tack had been moved and the granulation tissue disturbed, quantities of pus and blood filled the bronchoscope and caused a long delay before it could be cleared out. Even then I could not see the tack but I grasped it again; the forceps again slipped off, and again quantities of blood and pus occupied my close attention for about ten minutes. This was repeated in all four times. The last time the forceps held longer and the tack was drawn nearly to the glottis but when it slipped it was suddenly drawn 4 or 5 cm. farther into the lung than it had been at first and it unfortunately lodged in the upper branch of the left main bronchus, which appears to me the most difficult place to reach with a bronchoscope.

Afterward, by prolonged swabbing with strips of gauze, I cleaned out the pus and blood and then passed a bronchoscope throughout the whole length of the left main bronchus and obtained a view down its lower branch. With a large probe I also explored the bronchi 5 or 6 cm. beyond the end of the bronchoscope but could in no way feel or see the tack. At the end of about one hour I abandoned the operation for the time, and sent the patient to his room where he was placed in a croup tent with the temperature at 85 F. and given 4 drams of solution of ammonium acetate every fourth hour. Air entered the left lung much more freely afterward and the patient had very little fever.

Second Operation.—Another radiograph was taken which showed clearly the new position of the tack. As the child was doing better I waited fifteen days for him to gain more strength. I then gave ether and did tracheotomy; for I felt confident that the foreign body could not be secured by upper bronchoscopy. When I introduced the bronchoscope, it was quickly filled with pus and blood, which came again and again for an hour and a half as I swabbed it out, giving me just a glimpse for about five seconds after every eight or ten minutes of swabbing. Finally, with the bronchoscope directed downward and outward at an angle of about 40° from the median line, I was able to bring the shaft of the tack into view with the point projecting above and outside the end of the instrument. Since the former operation I had obtained a much stronger forceps and with this I grasped the tack two or three times and manipulated it and the bronchoscope until I brought its point into the end of the tube. Then grasping it firmly and holding on like grim death I worked it gradually upward until I brought it and the distal end of the bronchoscope out of the trachea at the same time. The patient was treated as before. He did well and was allowed to go to his home in a distant state twenty days after the operation.

This case illustrates the difficulty caused by granulation tissue, and the importance of the after-treatment. It impresses on operators the necessity for having strong forceps and the importance of lower bronchoscopy when the foreign body has passed laterally any considerable distance from the median line.

Case 3.—A boy, aged 10, had inhaled a wire shingle-nail about 2.5 cm. in length when only 2 years of age and had carried it in his air-passages for eight years with very little discomfort and but little injury to his health, until within a few weeks before he was brought to me. The father stated that at the time of the accident the boy was taken with a sudden choking spell and that on looking in the throat he saw the point of a nail but was unable to get it out. The choking spell soon passed off and afterward the boy seemed very well to the parents excepting for frequent severe attacks of bronchitis attended by cough, wheezing and rattling in the chest. Notwithstanding these he grew and developed well. about ten days before he came to me, in the latter part of August, 1911, when taking a hard bicycle ride in the wind,

he was attacked by a severe spell of coughing and raised some blood. He also coughed up some hard substance about the size of a pea. The father showed me two or three little grains, a millimeter or more in diameter, which the boy had coughed up and which appeared to be bits of iron rust. Since the coughing spell he had suffered four or five paroxysms of cough attended by dangerous suffocative symptoms.

Examination.—I found him as large as most boys of his age, weighing 70 pounds and in good general health. He had occasional cough and a small quantity of mucous expectoration, which had been blood-stained occasionally during the past two weeks. His appetite and digestion were good. The nasal and throat symptoms were negative, and the heart normal. Over the apex of the right lung as low as the fourth rib the reasonance and respiratory sounds were practically normal but below the fourth rib there was marked dulness with considerable loss of movement, and the respiratory murmur was only about half as intense as on the left side. There were a good many bronchial râles over both lungs, but there were no other abnormal signs on the left side of the chest. The father brought with him a radiograph which showed an indistinct shadow in the region of the right main bronchus about 3.4 cm. long and 7 mm. wide, in the lower part of which we thought we could see the outline of the head of a nail. This in connection with the history and physical signs indicated the presence of a foreign body in the air-passages.

Operation.—The patient was taken to his home in a neighboring state for a couple of weeks, but then returned to the hospital where I did a lower bronchoscopy the next day. Four hours before the operation, 1/225 grain of atropin was given hypodermically and an hour before the operation ⅙ grain of morphin and 1/225 grain of atropin were administered in the same way. The patient was given ether and I attempted to introduce the bronchoscope but found some obstruction about 3 cm. below the glottis which at first prevented the introduction of a hollow director 6 mm. in diameter. The breathing at once became very difficult and suffocation was imminent; but I soon succeeded in passing the director beyond the obstruction which gave him much more air. I then did a low tracheotomy, leaving the director in the trachea during this operation. A few seconds after the trachea was opened, there came out about ¼ dram of a thick black fluid which I at first supposed to be very dark venous blood, but I soon found in it small hard particles and on introducing a forceps I grasped and brought out a small piece of the nail, which I found very friable. It was broken into many small pieces during removal, leaving only the head intact. After removing all that was near the opening into the trachea, I introduced the bronchoscope and removed all the pieces that remained. I found a marked cicatrix on the upper edge of the septum at the bifurcation of the trachea and another on the left wall of the trachea just above this from irritation by the point of the nail projecting from the right bronchus.

Course.—A tracheotomy tube was kept in the wound for two days to guard against danger of swelling of the larynx. The day before the operation the pulse ran from 84 to 90 and the temperature from 98.8 to 99.2 F. The day after the operation, pulse was 96-100, temperature 100.4 to 101.2. Subsequently both declined to normal on the fifth day. The patient was kept two or three days in a croup tent and given solution of ammonium acetate freely four times a day. He improved rapidly and was sent to his home six days after the operation. The father reported at the end of three months that the boy was in fine condition and had gained 10 pounds.

This case shows the remarkable tolerance sometimes exhibited by the air-passages for foreign bodies; it demonstrates the necessity for being prepared to do a quick tracheotomy when dyspnea is present, and the advantage gained by having a tube through the glottis into the trachea during the tracheotomy; and it illustrates again the postoperative treatment that has seemed to me very important after bronchoscopy in preventing dangerous sequelæ.

15 East Washington Street.

A CASE OF REPAIR OF FACIAL DEFECT

RAYMOND C. TURCK, M.D.
JACKSONVILLE, FLA.

Patient.—D. P., a colored boy, aged 13, was recommended to the "Fund for Ruptured and Crippled Children" by Dr. J. L. Kirby Smith of Jacksonville and sent to Brewster Hospital in February, 1911.

History.—The early history of the case is very indefinite. The patient's mother states that the boy had been healthy until 6 years of age when a "small red spot or rising" appeared on his right cheek. This spot rapidly increased in size with intense local inflammation and great systemic prostration. Within ten days the inner portion of the right cheek, the right half of the upper lip with the exception of a part of the vermilion border, the right nostril and part of the superior maxilla had sloughed away. The parents deny having had syphilis and there is no indication of past or present lues in the boy. The condition as presented, together with the history of a rapid slough or gangrene, naturally leads to a tentative diagnosis of cancrum oris as the cause of the deformity.

Examination.—The boy's condition on admission is clearly shown in Figure 1. There were no raw surfaces. The defect in the superior maxilla in the region of the infra-orbital foramen was partially closed off by closely adherent skin. The alveolar process was missing from the median line of the jaw to the first right molar tooth, and there was an irregular defect in the hard palate extending posteriorly for three-quarters of an inch. The orbit and contents, the nasal septum, the external portion of the superior maxilla, and the lower jaw were not involved. The right half of the upper lip, with the exception of about one-half of the right vermilion border, the right nostril, and a portion of the right side of the nose had been destroyed. Cicatricial contraction had drawn the lower lip well out toward the right malar process. Nasopharyngeal adenoids were large and numerous.

It was decided to attempt a repair of the deformity in two stages. First, closure of the defect in the hard palate, and second by repair of the soft parts. The closure of the palatal defect, as in all large defects in the anterior portion of the hard palate, presented some problems because of the difficulty in forming mucoperiosteal flaps of sufficient size and having an efficient blood-supply.

First Operation (Feb. 14, 1911).—Under ether anesthesia the ragged borders of the defect in the palate were pared and beveled. The angle of freshening extended upward and backward to provide as broad a denudation of the edge as possible. A mucoperiosteal flap of half an inch in width, extending from near the right alveolar process to a quarter of an inch to the left of the median line, was lifted from the oral surface of the hard palate just posterior to the defect. Care was taken that the incision did not cut the main trunk of the descending palatine artery, hence the flap derived its nourishment from that vessel. The flap was shifted forward and to the right and its outer edge stitched with chromic catgut to the denuded margin of the defect.

A second mucoperiosteal flap was outlined on the left side of the oral surface of the palate by an incision extending along the left alveolar border from the median line to the second molar tooth external to the left descending palatine artery, and an incision directly backward in the median line of the palate. The flap was lifted, slid to the right and sutured to the free edge of the flap already in place. Both flaps were temporarily secured to the edge of the bony defect by a few stitches of fine catgut. The raw surfaces of both flaps were uppermost.

A flap of buccal mucosa, considerably larger than the area to be covered, was dissected from the right cheek and swung up and over the mucoperiosteal flaps so that the mucous surface formed a new floor for the nasal fossa and the raw surface was in contact with the raw surface of the oral flaps. The edge of the buccal flap was stitched with silk to the denuded border of the nasal mucosa. The adenoids were removed. The denuded areas of the palate were filled with iodoform strip and the roof of the mouth anteriorly was

packed with iodoform gauze to protect the flaps and to hold them snugly against the bone in their new position. The gauze was held in place by cross strands of silkworm-gut carried through the alveolar mucosa. No packing was placed in the nose.

The results of the first operation were very satisfactory. Union was good except in the extreme anterior portion of the defect, where a part of the right mucoperiosteal flap atrophied. In the palate proper there was a sound partition between the oral and nasal cavities.

Second Operation (March 18, 1911).—Under ether anesthesia the outer border of the right nostril was denuded and the upper lid was loosened from the jaw. The lower lip was divided by a straight cut downward from a point corresponding to the right extremity of the vermilion border of the upper lip. The vermilion border of the outer segment of the lower lip was removed. A relief incision was made outward from the upper point of attachment of the lower lip, and a flap consisting of a part of the lower lip and cheek was freed from the bone. The flap was shifted so as to fill the defect in the body of the upper lip and to cover the lower portion of the major opening as shown in Figure 2. The skin and subcutaneous tissue were dissected from the bone at the upper outer side of the defect, loosened well out to the malar bone, and sutured to the side of the nose, nostril and upper edge of the lower flap (Fig. 2). All suturing in this operation was done with silkworm-gut and horsehair. An iodoform gauze dressing was applied externally. As a result of the second operation a portion of the defect was closed. The upper flap united nicely; the flap at the lower angle of the nostril sloughed and retracted. A small slough occurred in the median line of the upper lip. There was too much slack in the lower lip, and because the relief incision through the lower lip had not been extended far enough downward the outer angle of the mouth was drawn up.

Summarizing: the lower relief cut was too short; there was pressure necrosis from too many stitches at the lower angle of the nostril; there was too much tension on the lower flap.

Third Operation (May 1, 1911).—Chloroform anesthesia was used. The small opening in the middle of the upper lip was freshened and closed by two silkworm-gut stitches. The margins of the remaining defect were thoroughly denuded. The right angle of the mouth was cut through, the lower lip was pulled outward and cut so that its length was just equal to the length of the upper lip. This cut was extended downward, inside the facial artery, to the lower border of the inferior maxilla as a tension relieving incision. Another relief cut was carried from the upper margin of the defect, through the cheek to a point just below the lower jaw and external to the facial artery. The flap, therefore, was abundantly nourished. A lateral incision was made to relieve tension at the base of the flap. The facial artery again was avoided. The flap was drawn upward and toward the median line and sutured with alternate deep sutures of silkworm-gut and superficial sutures of horsehair, as shown in Figure 3. The lateral incision at the base of the flap was sutured longitudinally. Two long, deep tension sutures of silkworm-gut, secured by buckshot, were placed as shown in Figure 3. A moist dressing of salt solution was applied.

The results of the third operation were as follows: All openings were closed; union was firm; the slack in the lower lip was taken out and the mouth was fairly straight. The boy had but one nostril, but this provided for both sides of the nose, a part of the cartilage having been removed for the purpose. The development of pleurisy, probably tuberculous, a few months after the third operation, thwarted my desire to loosen the cartilaginous nasal septum, shift it to the median line and establish two nostrils.

Consolidated Building.

Fig. 1.—Facial deformity probably caused by cancrum oris in a boy of 13.

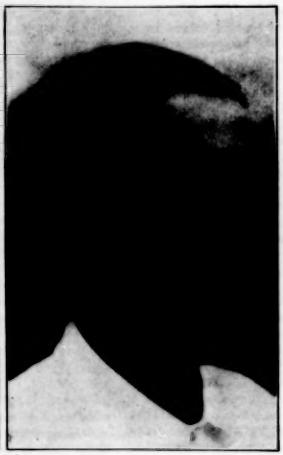

Fig. 2.—Same patient as in Figure 1. Illustration showing line of suture in the second operation.

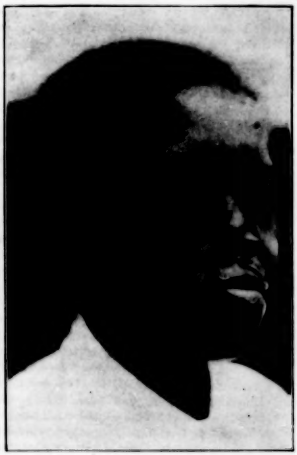

Fig. 3.—Third operation, showing construction and suture of flap and tension sutures of silkworm gut secured by buckshot.

Medical Treatment of Insanity.—R. Jones (*Western Canada Medical Journal*) emphasizes that the first consideration in regard to the treatment of insanity is to ascertain if there is any abnormal condition of the bodily organs, removal of which will favor the disordered brain functions. Instances are not infrequent (the adolescent forms of insanity in anemic girls) in which the restoration of bodily organs to their normal functions is followed by mental improvement. The reestablishment of menstruation and the cure of anemia means in these cases mental recovery, indicating the necessity for the combination of sedatives with general remedies which help to restore and build up the various systems of the somatic whole.

A NEW, SIMPLE AND EFFECTIVE TOURNIQUET FOR CONTROLLING HEMORRHAGE OF THE SCALP*

ERNEST LAPLACE, M.D.
Professor of Surgery, Medico-Chirurgical College
PHILADELPHIA

The various means of controlling hemorrhage from the scalp are either very complicated or somewhat ineffective. Simple and effective control of hemorrhage is desirable inasmuch as in many cases profuse bleeding might be the cause of the patient's inability to recover from the given surgical procedure on the head.

The method here described controls the hemorrhage absolutely. It is at hand everywhere and offers advantages over all other methods used to-day.

It consists in applying to the patient's head a certain length of roller bandage, 2 inches wide, from the chin over the head to the nape of the neck, and a similar piece of bandage crosswise from shoulder to shoulder over the head. An ordinary quarter-inch piece of rubber tubing, 7 feet long, is then applied over the bandage around the head on a level with the external auditory meatus. The tubing is then stretched effectively so as to make four rounds about the circumference of the head; the ends of the tubing are then tied in a loop or clamped with forceps. The bandages which cross at the vertex of the head are then cut at the crossing point; this makes four strips of bandage, one on each side of the head, one over the forehead and one over the occipital protuberance. These strips passing under the rubber tubing are now tied at their respective places, securing the rubber tubing in position and preventing its slipping up or down.

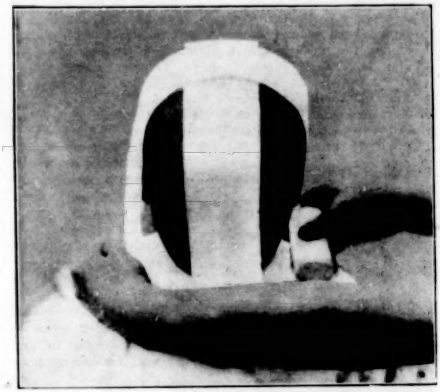

Fig. 1.—First step in the application of scalp tourniquet.

Fig. 3.—Method of tying the strips of bandage at the four points on the tourniquet.

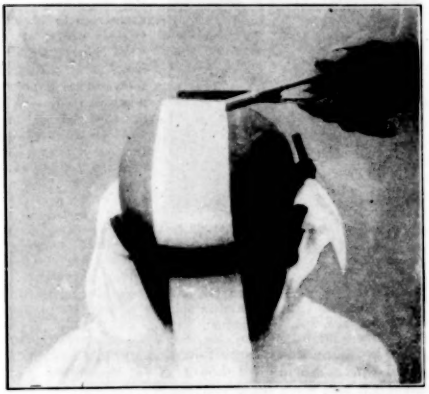

Fig. 2.—Rubber tubing applied around the head just above the ears, the strips of bandage across the head being cut.

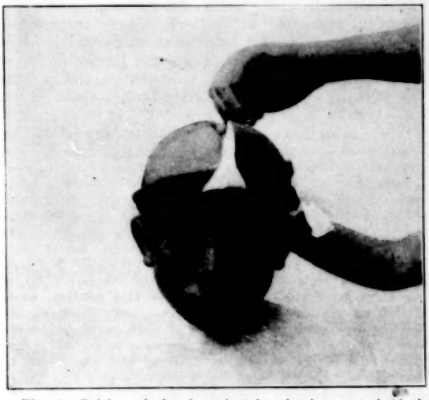

Fig. 4.—Raising of the frontal strip, showing control of the tourniquet.

* Read before the Philadelphia County Medical Society, Dec. 13, 1911.

The loops can be held by an assistant and used to steady the head. If the strip of bandage in the occipital region is pulled down, the rubber bands are brought under the occipital protuberance and effectively control hemorrhage from the scalp in operations on the cerebellum.

This method enables one to perform the surgical operations about the scalp without the loss of any arterial blood and with the escape of but a trifling amount of venous blood, and as far as I know allows better control of hemorrhage than any of the more complicated methods now in use.

1828 South Rittenhouse Square.

DECOMPRESSION OPERATIONS FOR FRACTURES OF THE BASE OF THE SKULL*

ROBERT L. PAYNE, JR., M.D.
NORFOLK, VA.

Fracture of the base of the skull has boasted of a mortality of 64 per cent., and only during the period of the past five years has this high fatality shown any decrease. The treatment up to 1906 was a tentative one, marked by such erratic measures as drugs, lumbar puncture, venesection and expectant measures, and only since the experimental researches of Leonard Hill, Cushing and Krause have we known the rationale of decompression in such lesions.

The understanding from these experiments of how blood at the base produces both a local and general increase of intracranial pressure and how this pressure causes death through anemia of the vital centers in the medulla, will readily explain the rationale of decompression operations for fracture of the base.

During a meeting of southern railway surgeons at Birmingham, in 1906, I took the stand that exploratory decompression for basal fracture was the only correct treatment, and before the same association, at Charlotte this year, in a paper on skull fractures I spoke of the basal type as follows:

Depending on the amount of extravasation present, we have more or less compression of the vital centers in the medulla, and when symptoms of this are present, operation is absolutely indicated. Given a case of suspected basal fracture with high blood-pressure, slow or very rapid heart, disturbed respiration of the Cheyne-Stokes type, and our procedure would at once be a subtemporal decompression. The brain should be elevated gently with a blunt spatula, and as much of the blood as possible be removed. If none is found, opening the opposite side is absolutely necessary. It is impossible to ligate bleeding points in this location, hence if clotting has not occurred, we must carry down to the bleeding area small, narrow strips of plain gauze, but if the hemorrhage has ceased, it is only necessary to prevent future compression of the medulla by draining with small rolls of rubber dam. Many a fatal case which is treated expectantly would be saved if this procedure were carried out.

Since this mode of treatment for basal fracture is comparatively a new procedure and only a small number of cases have been recorded, I submit the following case report:

Patient.—A. T., a sailor, while at sea was struck on the vault of his head by a falling yard-arm. Unconsciousness intervened immediately and three days later, when the vessel made port, he was brought to St. Vincent's Hospital under my care.

Physical Examination.—Some ecchymosis around the mastoid process of the left side was revealed, but no evidence of injury on the vault at the point of the blow. There was complete paralysis of the lower right face, the right half of the tongue, the right arm and right leg. The patient was breathing stertorously; the pulse-rate was 44; there was a pronounced increase of blood-pressure; a moderate dilatation equally of both pupils and profound unconsciousness. With these symptoms, especially the facial and tongue paralysis, a diagnosis of basal fracture with medulla compression was made, and a left side decompression immediately undertaken.

Operation.—Under a very small amount of ether, a large osteoplastic flap was turned down. The dura was found to be very tense, and when this membrane was nicked to begin the dural flap the cerebrospinal fluid came up through the small opening in a short parabolic curve. There was no clot or blood found on the cortex and the motor area was not involved. A small flat retractor was then passed down toward the foramen magnum and as it glided downward the fracture could be distinctly felt in the petrous portion of the temporal bone. When the temporal lobe was gently elevated there was at once extruded about one ounce of dark liquid blood, some clots and a few small pieces of brain tissue. The bleeding had evidently stopped, so a small piece of rubber dam was passed down to the medulla to prevent further compression, the osteoplastic flap replaced and the wound closed.

Patient with right facial paralysis indicating lesion at the base six weeks after the performance of a left-side decompression.

Course.—The patient's pulse immediately rose to 70, and twelve hours afterward he could slightly move the paralyzed foot. The improvement was steady and at the end of one week he had regained the use of his tongue, arm and leg, while the lower right face remained paralyzed. This persistence of facial paralysis in spite of the tongue regaining its motion is rather unusual. At the end of six weeks, when the patient was discharged, this facial paralysis still persisted in spite of a complete recovery of tongue, arm and leg function.

As a diagnostic measure lumbar puncture is valuable when instituted a few hours after hemorrhage has occurred, but, when undertaken as a therapeutic measure for relief of intracranial pressure, often results seriously. This is due to the fact that we have no ready means of determining the amount of increased pressure, and when this is high a sudden withdrawal through the spinal route permits the medulla and pons to be sucked into the foramen magnum, producing a fatal result through pressure on the vital centers. Several such cases have been reported.

The dangers of the old-time custom of venesection in cases of apoplexy, fracture of the skull and allied conditions having an increased intracranial pressure, are

* Read before the Seaboard Medical Society, Virginia-Carolina, December, 1911.

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manifold. The older idea of venesection was to stop further bleeding through relief of the high blood-pressure as manifested by the full bounding pulse. This is decidedly wrong; for if we understand the effect of increased intracranial pressure on the vital centers in the medulla we will see that this high blood-pressure is Nature's effort to keep the patient living. Since the brain is no more compressible than water, the effect of increased tension is to produce an anemia of the vital centers in the medulla. The anemia thus produced acts as a stimulant to the vasomotor centers and as a depressant to the respiratory center. Stimulation of the vasomotor centers produces a general constriction of the vascular system, especially the splanchnics, resulting in the increase of blood-pressure so commonly found in these conditions. This increase in blood-pressure is raised sufficiently to overbalance the increase of intracranial tension and thereby the local anemia in the medulla is overcome and the respiratory center again resumes function. This increase of blood-pressure and corresponding support of the respiration continues for hours or days until exhaustion of the vasomotor centers occurs, when death takes place through respiratory failure.

Thus we can understand the error of venesection in these cases of intracranial bleeding and also appreciate the importance of closely watching the blood-pressure. A pronounced rise of blood-pressure would indicate the necessity of immediate decompression, while a fall would probably mean a fatal outcome through respiratory failure.

300 Freemason Street.

MULTIPLE HEMANGIOPERITHELIOMA OF THE BRAIN*

WILLIAM G. SPILLER, M.D.
Professor of Neuropathology in the University of Pennsylvania
PHILADELPHIA

Endothelioma or perithelioma is not an uncommon tumor within the cranium and usually is solitary. Endothelioma may occur in the form of multiple tumors on the dura, and sometimes as miliary dural growths, as in a case reported by Dercum, Keen and Spiller.[1] Endothelioma within the cranium usually has its origin from the dura and causes atrophy of the underlying brain by pressure, without infiltrating it. In this form it is one of the most benign of intracranial tumors, and yet it may recur if removed, and become most malignant and may infiltrate the bone above it. It is rare to find numerous tumors of an endotheliomatous character within the brain substance; as L. Bruns says: "In the brain substance itself, endotheliomas are very rare." In the form of perithelioma with the rosette-like arrangement of columnar cells about the vessels, it is more common within the brain substance than in the form of chains or columns of cells or groups of concentrically arranged cells.

I have seen multiple perithelioma within the brain substance only in the case reported in this paper, and have found no similar case recorded. The tumors were very numerous in this case, and every tumor was the site of hemorrhage. These hemorrhages varied greatly in size. The largest measured 2 by 3.5 cm., and some were the size of a pea or less. Most of the tumors had a connection with the cortex at one part, but some were entirely within the brain, one for example, the size of a pea, was within the right lenticular nucleus, and is shown in Figure 1. An old area of sclerosis was in the left upper temporal convolutions.

This case illustrates the malignancy that perithelioma may assume, as the tumors were found in the cerebellum and pons as well as in the cerebrum.

It is rare to find more than one recent hemorrhage in a brain, and yet I have at least three specimens in my laboratory in each of which two recent and separate hemorrhages occurred.

Souques[2] reports two remarkable cases of this kind. In one, twenty-eight recent hemorrhages were counted in the brain and cord, and in the other, eleven. Some

Fig. 1.—Transverse section of the brain in a case of multiple hemangioperithelioma of the brain, showing five tumors with hemorrhage.

hemorrhages probably escaped detection on account of the thickness of the sections, and those of the size of a pinhead were not regarded. The hemorrhages were small and mostly just beneath the cortex. Nothing in the clinical condition suggested multiple hemorrhage, any more than in my case. One patient certainly had nephritis, and the other probably had. I do not know of any description of multiple hemorrhage of the brain, each caused by tumor within the brain substance, and for this reason also the case reported here is interesting.

Patient.—C. H., male, aged 60, was referred by Dr. L. B. Heimer to Dr. Mills, who sent the patient to the University Hospital, Feb. 28, 1911, to be placed under my care. Dr. Heimer furnished the following notes:

* Read before the Pathological Society of Philadelphia, Dec. 14, 1911.

1. Dercum, Keen and Spiller: THE JOURNAL A. M. A., April 28, 1900, p. 1026.

2. Souques: Nouv. Iconog. de la Salpêtrière, May-June, 1911, p. 193.

History.—During February, 1910, the man suddenly became flushed and reeled when he attempted to stand. His speech was a jargon of syllables and numbers so that he could not be understood, and he did not understand what was said to him. He was unable to walk unassisted; his writing was as much disturbed as his speech. His condition gradually improved, and he returned to work. The sensory aphasia evidently was caused by the area of sclerosis in the upper left temporal convolutions.

In January, 1911, he had convulsions of the entire body, worse in the right side, and the face and eyes were turned to the right. When this attack passed off he was paralyzed on the right side, and remained so a few days.

When he was first seen by Dr. Heimer about the end of 1909, he had a large mass above the sternoclavicular articulation on the left side. Later he had several tumors on each side of his body and in the left elbow joint. The tumors became gradually more numerous and larger. The Wassermann reaction was negative.

Examination.—The man was examined by me March 2, 1911. Paraphasia was marked; he was word-deaf and word-blind. In testing him with a feeding-cup or a bright object, and by striking toward the eyelids, right lateral homonymous hemianopsia was revealed. The right nasolabial fold was not so deep as the left when the face was at rest or when the patient showed the teeth. He could only occasionally be made to show the teeth and then by imitation. The limbs were not paralyzed, but it was impossible to get him to grasp the hand of the examiner firmly. The biceps and triceps reflexes were about normal on the left side, and little exaggerated on the right side. The patellar reflex was about normal on the left side, and exaggerated on the right side. The Achilles reflexes were nearly normal. Upward movement of the toes in the Babinski reflex was obtained on the right side, downward movement on the left side. The right lower limb probably was paretic, as it was not withdrawn with the same vigor as the left when it was stuck with a pin. Numerous tumor-like swellings were found in different parts of the body.

Fig. 2.—Microscopic section of a tumor, from a case of multiple hemangioperithelioma of the brain.

Dr. de Schweinitz examined the eyes and reported: "Right eye, disk shows no choking but upper and inner margins are clouded. Left eye similar, but margins are clearer than those on the other side. No hemorrhages. Pupillary reaction to light present but not very prompt."

Course.—A few days after the examination the man developed Jacksonian epilepsy, one convulsion rapidly following the other, implicating the upper part of the face on both sides and the right side of the mouth and the right upper limb. The right lower limb and the left limbs were not affected. After the convulsions were controlled, the right side of the body was in a state of flaccid paralysis. The man did not rally after this attack and died March 13, 1911.

Necropsy.—Permission was given for removal only of the brain and cord, and this was done by Dr. Karsner. Numerous areas of hemorrhage within the brain were examined microscopically and perithelioma was found in all the hemorrhages. One of the tumors removed from the trunk was examined by Dr. Karsner and diagnosed as endothelioma.

I am indebted to Dr. Allen J. Smith for the photographs.

4409 Pine Street.

A CASE OF ANURIA OF ONE HUNDRED AND FOURTEEN HOURS' DURATION

DECAPSULATION OF BOTH KIDNEYS WITH COMPLETE RECOVERY

ARTHUR D. DUNN, M.D.
OMAHA

Patient.—C. B., aged 45, married, traveling salesman, was seen March 13, 1909, with Dr. Alexander S. Beatty, of Council Bluffs, Iowa. The patient's past, personal and family histories, as far as they could be obtained from his wife, had no bearing on his present malady. Dr. Beatty had treated him three weeks previously for an attack of headache in which albumin and blood had appeared in the urine. The trouble had rapidly disappeared under saline diuretics. March 12, he had consulted Dr. Beatty for a headache at which time the urine had showed no albumin. March 9, at about 10 p. m., he had passed urine for the last time. Saline diuretics, diuretin, digitalis, sweats and hot irrigations of bladder were resorted to without effect. The patient had sunk gradually into a stupor in which the following examination was made at the end of the fourth day of complete anuria:

Examination.—The patient was a well-developed middle-aged man; his face was flushed, the breathing was stertorous, and his skin felt dry and hot. One could arouse him easily from his stupor but he could not fix his attention and his answers to questions were irrelevant. His eyelids were puffy. The pupils were normal in size and were equal but reacted sluggishly to light and distance. The extrinsic muscles and fundi were normal. The tongue had a brownish coat and the breath had a urinous odor. Examination of the heart was negative except for an accentuated aortic 2nd. The pulse was 80, full and bounding. The blood-pressure (Stanton) was 180; the temperature, 98.6. The lungs were normal except for numerous medium-sized moist râles at the base. Abdominal examination was negative. There was some tenderness in both lumbar regions.

The deep reflexes were sluggish; Babinski, Oppenheim and Gordon were absent. There was no clonus. The abdominal reflexes were barely perceptible. There was a general marked hypesthesia. Catheterization was absolutely dry, as it had been on several previous occasions.

Operation.—A diagnosis of acute congestive nephritis (or edema of the kidney) was made. Hot normal salt solution in large quantities per rectum was advised and, if no results were obtained in ten hours, removal to the hospital for decapsulation of both kidneys. The operation was performed by Drs. Macrae and Beatty at 12 noon, March 14, 1909, 110 hours after the last urination. Only a few drops of chloroform were used because the coma was almost complete. Both kidneys were found to be enormously swollen, dark red in color, tense and bulged through the slit in the capsule. "The kidneys seemed anxious to get out of their capsules," to use the apt expression of Dr. Macrae. Urination commenced four hours later (114 hours after complete suppression began) and 173 ounces were passed during the first twenty-four hours and 64 ounces during

the second twenty-four hours. Dehydration was so rapid that subcutaneous and continuous rectal salines were employed to counteract an imminent collapse. Recovery was uneventful.

Postoperative History.—The patient is alive and well two and one-half years after the operation. Repeated examinations of the urine up to the present time have failed to reveal any chemical or morphologic abnormalities.

The condition with which we were dealing was that of an acute edema of the kidney dependent in its ultimate analysis on an unknown cause. The condition is best explained by variation of the affinity of colloids for water. This is dependent on the acidity of the kidney which is increased by lack of oxygen (Fischer). As the kidney swells, circulation is interfered with on account of a relatively tense capsule, the oxygen supply decreased and the acidity correspondingly increased. Thus a vicious circle is established. Decapsulation relieves the intracapsular tension, circulation is restored and oxidation facilitated with resultant diuresis.

The treatment of this condition with hypertonic sodium chlorid and sodium carbonate solution has been subsequently advanced by Fischer. This case was admirably suited for a test of such treatment.

We have here a case in which the much-abused operation of decapsulation was efficacious. The rationale of the procedure is clear and the operation should be reserved for similar crises in which an occasional brilliant result may be expected.

804 Brandeis Theatre Building.

PECULIAR TWIN ECTOPIC GESTATION

EVAN O'NEILL KANE, M.D.
KANE, PA.

M. P., aged 34, gave an indefinite history of abdominal and pelvic disturbance with menstrual irregularity for more than three months and had been treated by her local physician for indigestion and a suspected miscarriage.

Three days before operation, she had experienced severe pain in the lower abdomen, nausea and a feeling of prostration. On arriving at the hospital, she showed symptoms of shock—paleness, cold extremities, profuse sweating and a thready pulse. The abdomen was distended, boggy and tender to touch.

The abdomen was found filled with blood, fluid and clotted. A mass filled the lower abdomen and was generally adherent to the intestines and omentum. When this was torn through into the pelvis, a large sac was opened containing clear fluid. Within this lay two fetuses, the cords of which arose close to each other from a large single placenta adherent posteriorly. The fimbriated extremity of the thickened left tube was filled with coagula. These fimbriæ bled freely when the adhesions were broken up, but no definite circulatory connection could be demonstrated between them and the sac proper and its contents.

The greater thickening of the left tube, fimbrial blood-clot and bleeding therefrom were suggestive of ampullar origin despite the posterior position of the placenta and the fact that the principal blood-supply appeared to be derived from the rectum and omentum.

There is so much discussion as to the reality of true abdominal gestation that one is forced to conjecture whether most or all cases reported as abdominal gestations do not commence, as I presume this case did, at the mouth of the tube, being ejected therefrom at a very early date to points that may be quite distant, the true origin being undiscovered.

230 Clay Street.

AN ETHER VALVE FOR USE IN ANIMAL EXPERIMENTATION *

D. E. JACKSON, PH.D.
ST. LOUIS

For many years various forms of ether valves have been in use in experimental laboratories.[1] The arrangement described below has been found, after several weeks' trial, to be more nearly free from objections than any other form of valve which has been in general use.

The valve consists essentially of a brass box, 5.5 cm. long, 3 cm. deep and 3.7 cm. wide. An interior partition divides the box into two compartments. A tube, *a* (and *a'*), 1.1 cm. in diameter and 5 cm. long, enters one end of the box. Air passes in through this tube. At *b'* the entering air comes in contact with a door-shaped valve (*b'*) which can be instantly set at any angle by

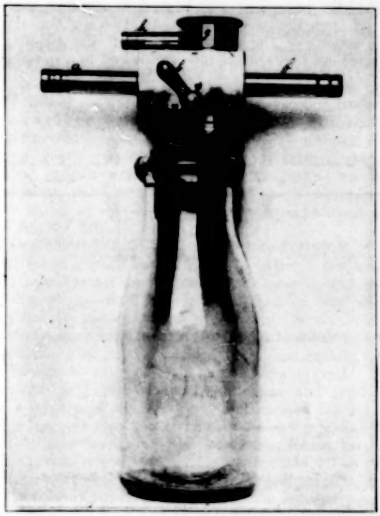

Fig. 1.—Ether valve for use in animal experimentation.

means of the small lever *b*, seen in Figure 1. The angle at which this valve is set regulates the relative amounts of air and ether vapor which the animal breathes. When the lever is turned up all entering air passes down through the tube *c'*, in to the ether bottle and thence out through the tube *d'* into the compartment *e'*. From here a tube *f* (and *f'*) exactly similar to tube *a* (and *a'*) passes out. A rubber tube attached to this metal tube connects with the tracheal cannula. Inspired air passes from *e'* into the dog's lungs through tube *f* (*f'*) and expired air returns through the same tube to *e'*. From *e'* the expired air passes upward through a valve into a cylindrical chamber *g* (*g'*). The valve leading into this chamber from *e'*, and the one leading from the tube *d'* into *e'* are essentially similar, and consist of thin round

* From the Pharmacological Laboratory of Washington University Medical School.

1. One of the best of these has recently been described by Professor Guthrie of Pittsburgh, in THE JOURNAL A. M. A., Sept. 9, 1911, p. 887.

disks of metal which lie flatly down on the round openings in the metal below them. Each valve opens in an upward direction. Each of these valves has a screw cap which can be readily turned off in case anything should go wrong with the valves.

The expired air, which passes into *g* (*g'*) has three ways by which it may pass out, depending on the adjustment of the tube *h* (*h'*). The chamber *g* (*g'*) is made up of two walls 3.4 cm. in diameter and 1.5 cm. high. The inner wall is soldered firmly to the top of the box. The small diagram (Fig. 3) represents a horizontal section of these walls seen from above. The inner wall has three outlet openings and the outer wall has two outlet openings, to one of which the tube *h* (*h'*) is soldered. This outer wall swivels around so that the outlet openings in it may be turned to correspond with the openings in the inner wall. By this adjustment, which is regulated by a spring ratchet on top of the box, part of the expired air may be used to operate a tambour led off from the tube *h* (*h'*), thus recording the respiratory actions of the animal; or all of the air may be directed out through the tube and led off to a spirometer,

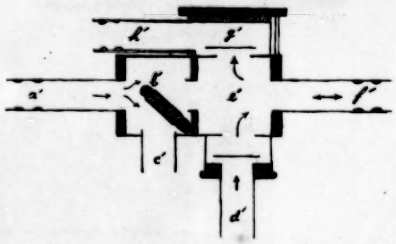

Fig. 2.—Diagram of ether valve for use in animal experimentation.

Fig. 3.—Horizontal section of walls of chamber *g*.

or other collecting apparatus; or all of the expired air may be simply allowed to escape into the room. A safety arrangement is provided for the respiratory tambour in case it should be necessary to suddenly give the animal artificial respiration. This consists in turning the tube *h* (*h'*) sixty degrees around to the right. The spring ratchet catches the outer cylinder at this point and this shuts off all communication between the tube and the chamber *g* (*g'*).

If the lever valve *b'* be set so that the animal breathes in partly air and partly ether (Figs. 1 and 2), then part of the expired air may pass out of tube *a* (*a'*). If it is desired to collect all the expired air, then the valve *b'* is turned upward tightly against the opening in the partition and all entering air passes down through the tube *c'* into the ether bottle. In case the animal should get too much ether during the experiment, the cork is simply pulled out of the bottle a little and air is inspired directly into the tube *d'*, without having first passed through the ether bottle.

A friction ratchet inside the box holds the lever valve (*b'*) at any position in which it may be placed. The valve is purposely made of such a size that it exactly fits into the cork of an ordinary pint milk-bottle which is durable, cheap and easily obtained. I have found that somewhat more than one-half the amount of ether ordinarily used in an operation may be saved by the use of this valve, and the air of the operating room is thereby kept in much better condition. The valve is compact, there are no separate pieces to be misplaced, there are no parts that are at all likely to get out of order, and access is easy to any valve which might not seem to be working correctly. The operator has instant command of the amount of anesthetic administered. The device is readily adapted for either natural or artificial respiration or for insufflation. This valve was made for me by Mr. Paul Bauer, mechanician for the Washington University Medical School.

1806 Locust Street.

CESAREAN SECTION PERFORMED BECAUSE OF DYSTOCIA FROM VENTRAL FIXATION OF THE UTERUS

C. E. FERGUSON, M.D.
Professor of Obstetrics, Indiana University School of Medicine
INDIANAPOLIS

Cases of dystocia due to operations for relief of versions of the uterus have increased in number during the last few years. Ventrofixation and suspension are the chief causes, the latter seldom, if ever, leading to serious complications. In rare instances, suspension of the organ has terminated in a fixation due to adhesion of the fundus to the abdominal wall. These adhesions are traced to infections and abrasions of the serous coat during the operation, resulting in a firm adhesion of the uterus to the abdominal wall that prevents the freedom of expansion and mobility necessary in the pregnant uterus. The abdominal fixation of the pregnant uterus often results in uterine inertia, tetanic contractions and obstructive labor. The anterior wall of the uterus below the point of fixation becomes thickened and hypertrophied until it feels like a fibroid growth. This is due to the failure of this portion to expand during gestation. The cervix and lateral walls become greatly thickened and thus cause the uterus to buckle on itself above the point of fixation. The expansive power is weakened, the cervix dilates with difficulty and asymmetrically, and its thickened portion becomes a veritable tumor blocking the superior strait at the pelvic brim. In this condition the uterus cannot sink into the pelvis, and there is sometimes such an unsymmetrical expansion of the uterus that it looks not unlike a transverse presentation. There is marked anteflexion, and the cervix is drawn up backward until it points toward the promontory of the sacrum.[1]

The early history of these cases includes persistent vomiting, pain and abortion. Some patients are delivered at term of dead or living children by forceps, craniotomy or version.

It is plain that every patient subjected to a suspension or fixation should be carefully examined in the event of pregnancy. From the sixth to the eighth month, repeated examinations should be made in order to antici-

1. Edgar: The Practice of Obstetrics, 1904, pp. 657-659.
Dickinson: Am. Jour. Obst., 1901, xliv, 34-46.
Noble, Chas. P.: Tr. Am. Gynec. Assn., 1896, xxi, 247, 268.
Kelly and Noble: Gynecology and Abdominal Surgery, i, 559, 561.

pate any possible dystocia. When such forecast is doubtful, premature labor at the eighth month is the most conservative treatment.

Mrs. L., aged 36, white, American, the mother of two living children, in whom the previous labors were normal and uneventful, except for lacerations and uterine displacement, February, 1909, submitted to an operation for correction of the displacement. In April, 1910, she became pregnant; suffered from nausea and vomiting to a greater degree than in any previous pregnancy, and had more or less pain, which she referred to the region of the abdominal incision, in the pelvis during the entire gestation period.

On Jan. 23, 1911, I was called to see her in consultation with Dr. J. F. Robertson, who was unable to reach the cervix with the examining finger. Nor was I until I had placed her under chloroform and introduced the entire hand into the vagina. In my search for the mouth of the uterus the finger passed above the promontory of the sacrum. The os was partly dilated and pointed directly backward to the fourth lumbar vertebra. The head was presenting and water was escaping with each contraction of the uterus. By combined examination, the anterior uterine wall below the point of attachment to the anterior abdominal wall was found to be thickened to the consistency of a fibroid growth and occupied the larger part of the superior strait.

With two fingers in the anterior lip of the cervix I attempted to pull the uterus forward into the axis of the vagina, and partly succeeded. Taking away the chloroform in order to allow the return of the pains, I held the cervix in this position in the hope that the head might descend and engage. The first vigorous pain drew the cervix from my ineffective grasp and the uterine wall again filled the pelvic brim.

Returning again to the anesthetic, we undertook a podalic version in the theoretical hope that with a leg down we might succeed in keeping the cervix in the pelvis and in the axis of the birth canal. Passing across and above the face of the child I encountered a contraction ring encircling the uterus at a level with the point of fixation. This ring was due to the flexion of the uterus at this point.

By this time the pains were quite vigorous, the uterus scarcely relaxing between contractions. Despairing of delivering a living child by the vagina, and fearing tetanic contractions of the uterus and consequent rupture, I advised section in the interest of both mother and child. She was sent to the hospital, where, assisted by Drs. Robertson, W. V. Boyle and Guy F. Hobbs, I did a classical cesarean section. The extraction of the head was delayed by the contraction ring which grasped it below the chin, and was released only by extending the incision in the uterus into the adherent band that bound it to the abdominal wall. In spite of this delay the child cried vigorously and left the hospital with its mother on the fourteenth day.

327 Newton Claypool Building.

A Well-Expressed Aspiration.—May we keep our reverence unimpaired for the humble-minded and those who have suffered much, prays *Collier's Weekly;* our humor alert for our own mistakes and our self-sufficiency, and not at any time wreak it on the aged, the crippled, the obscure. May we guard childhood and honor age, however infirm and petulant, because it has gone a long way on the same road that bruises our feet; and ever seek to prolong the brief moment of joy as it visits children and lovers. May we have the grace to rejoice in the flow of life as it moves through men from generation to generation, and to be purified by the mystery in which we dwell—the night silences and the wonder of our inner life. May we look on the widespread spectacle of human suffering and, having endured to look on it, learn to know our single life—seemingly so unique—as a drop of that infinite sea. When it comes our time to realize that in this earthly progress we shall not long dwell with happiness or with success, may we clear our spirit of bitterness, and in calm strength continue at the work.

PRODUCTION OF ANTIBODIES BY TISSUES LIVING OUTSIDE OF THE ORGANISM *

ALEXIS CARREL, M.D., AND
RAGNVALD INGEBRIGTSEN, M.D.
NEW YORK

The recent development of an efficient technic for large cultures has rendered possible the study of the functions of tissues living outside of the organism. In order to ascertain whether tissues cultivated *in vitro* retained the property of reacting against antigens by producing antibodies, we have attempted to induce guinea-pig's bone-marrow and lymph-glands to become hemolytic for goat's red blood-corpuscles. In these experiments we were very much indebted to Dr. Hideyo Noguchi, whose advice enabled us to obtain immediately positive results.

Guinea-pig bone-marrow and lymph-glands were cultivated in guinea-pig's plasma in Gabritschewski boxes. Goat's blood was selected as an antigen because it is only slightly, or not at all, hemolyzed by guinea-pig's serum. Two drops of washed goat's blood-corpuscles were generally added to a culture containing twenty drops of plasma and five or six drops of a suspension of tissues in Ringer's solution. Together with every culture containing goat's red blood-corpuscles, a control culture without antigen was prepared. Other control cultures were made, composed only of guinea-pig's plasma and goat's blood, or of guinea-pig's plasma, goat's blood and bone-marrow killed by heat.

The Gabritschewski boxes were then deposited in an incubator at a temperature of 39 C. After a few hours, the fragments of bone-marrow and lymph-gland were surrounded by cells which soon invaded the whole medium. On the second day of their cultivation *in vitro,* leukocytes were inactive against the red blood-corpuscles, but on the third day they phagocyted them rapidly. On the fourth or fifth day, the boxes were opened. The plasmatic jelly was cut in small pieces and aspirated into a large pipette. The fluid that covered the bottom of the box was also taken. Fluid and medium containing the tissues were placed in glass tubes, frozen, brought back to room temperature and centrifugated. The technic of Epstein and Ottenberg, which permits of testing the hemolytic power of very small amounts of serum, was followed. The characters of the hemolysins were investigated by the ordinary methods.

It was found that the serum of the cultures containing goat's blood had acquired the power to hemolyze markedly goat's red blood-corpuscles, while the serum of the control cultures remained inactive. It follows that hemolysin appeared in the cultures under the influence of the antigen.

The nature of the hemolytic power acquired by the fluid of the cultures was then investigated. This fluid hemolyzed goat's red blood-corpuscles without the addition of complement. After having been heated at 56 C. for half an hour, it lost its hemolytic power. Then, by addition of complement, it regained the lost power to hemolyze goat's red blood-corpuscles.

Goat's red blood-corpuscles were placed for four hours at 0 C. in the fluid extracted from a five-day-old culture. Then they were separated from it by centrifugation, and guinea-pig's serum (complement) was added to them. They became hemolyzed, while fresh goat's blood-cor-

* From the Laboratories of the Rockefeller Institute for Medical Research.

pucles, to which guinea-pig's serum was added, remained unaltered. It was found also that the fluid, separated from the globules by centrifugation, and mixed with fresh goat's red corpuscles, had lost almost completely its hemolytic power. Therefore, it appeared that the hemolytic power acquired by the cultures was due to substances acting as natural hemolysins.

Since guinea-pig's bone-marrow and lymph-gland cultivated for five days with goat's blood generate substances that are hemolytic for goat's red blood-corpuscles, it can be concluded that tissues living outside of the organism react against an antigen by the production of an antibody.

Sixty-Sixth Street and Avenue A.

DIRECT TRANSFUSION OF BLOOD IN ACUTE HEMORRHAGIC DISEASE

F. R. FRAZIER, M.D.
YORKVILLE, ILL.

Patient.—S., male, aged 19 months. Family history entirely negative as to hemophiliac or other hemorrhagic tendencies; no discoverable syphilis; one paternal aunt died of pulmonary tuberculosis. Father, mother and one older brother healthy.

Examination.—The patient was a well-developed, well-nourished child. No rickets, no scurvy, or other constitutional dyscrasia. He had always been well except for an ordinary attack of measles from which he had recovered three weeks previously. Without apparent cause slow, continuous, uncontrollable epistaxis first appeared. The nares were unsuccessfully packed with adrenalin (epinephrin) tape. Twenty-four hours later hematuria, melena, hematemesis and hemoptysis appeared. These were accompanied by innumerable petechiæ of skin and all visible mucous membranes, which were small, varying from pin-point to split-pea in size, most numerous on forearms and legs. There were large ecchymoses under eyes. Temperature was 100 F., pulse 190, blood-pressure 70 Hg (Faught). The child was in a very critical condition.

Treatment—At this time direct transfusion of blood from the father was practiced and the blood-pressure of the patient was thus raised to 140. An interesting point is that the arm, when a small constrictor was lightly applied to it, immediately assumed a dark purple color and blood could be fairly seen oozing into the skin at a countless number of points. An immediate improvement was noticeable both in the epistaxis and in the patient's general condition. The patient was placed on aconite, calcium chlorid and gelatin, with slow enterocelysis of normal salt solution. Twenty-four hours later all hemorrhage had ceased. The temperature was 102.2 F.; pulse 142; blood-pressure 110. From this time on the recovery was uneventful. Six weeks later the child had presented no evidence of bleeding.

EARLY NERVE INVOLVEMENT IN SYPHILIS

J. GRAHAM HARKNESS, M.D.
VINELAND, ONT.

Patient.—The patient, J. D., a man aged 23, single, bank clerk, with negative family history, had always enjoyed good health until in April, 1911, in Winnipeg, he developed a hard chancre, three weeks after exposure. He was given an injection of salvarsan, resulting in the disappearance of the sore in a couple of weeks. This was followed by about one month's course of mercury. No Wassermann test was done. I could only get the history from the patient himself.

Clinical History.—About the middle of August, he began to notice some weakness of the right lower extremity, with some pain. He was treated for "rheumatism." As he was gradually getting worse, he came home about September 10, at this time walking with the aid of a cane. He was there seen by my father, who, as syphilis is practically unknown in that part of the country (Ottawa valley), and both poliomyelitis and cerebrospinal meningitis are common, did not at once recognize the nature of the trouble. The left lower extremity was rapidly involved, and by September 20, both lower extremities were completely paralyzed. He developed very severe headache, not relieved by coal-tar products. The pupils were dilated, sluggish, and he could not see to read. There was no vomiting. The temperature was normal throughout. September 28 he was put on potassium iodid, and improvement in the subjective symptoms began at once.

Examination.—I saw the patient, with my father, on October 9. At that time the headache had disappeared and he could see to read. He had general enlargement of the lymphatic glands. There were secondary eruptions more or less all over his body, and in his hair, the hair being dry and falling out. There were numerous mucous patches in the throat. Both lower extremities were paralyzed and flaccid. He could lift the right foot slightly (the one first involved), the left not at all. There was some muscular atrophy, most marked in the glutei. The plantar, patellar and cremasteric reflexes were completely abolished. Common pain and heat sensations were much reduced up to the middle of both thighs. He was hypersensitive to cold in the same areas. Coordination in the upper extremities was perfect. There was no sign of weakness in resistive movements. The bicipital reflex was slightly exaggerated. There was no sign of paralysis. The pupils were somewhat dilated and sluggish. There was no contraction of the field of vision. There was no opportunity of making an ophthalmoscopic examination, or a Wassermann test.

Treatment.—We decided to put the patient on mixed treatment: iodid of mercury, with potassium iodid. We taught his brother to massage the lower extremities, and to carry out resisting movements, taking precautions against infecting himself. Improvement was rapid; in two weeks the patient could move both lower extremities. In a month he could get around with crutches and was encouraged to do so; in six weeks he could walk with the aid of a cane; in two months he could walk unaided. The reflexes are returning. At the present time (January, 1912) he is apparently well and is anxious to get back to work. He has promised to persist in treatment.

The interesting features of the case are:

1. The short time elapsing between the time of the appearance of the primary sore, and the appearance of nervous symptoms (five months).

2. The extent and severity of the process, apparently involving the whole central nervous system.

3. The surprisingly rapid and complete recovery.

We have not thought it well to advise a second injection of salvarsan, in view of the nervous involvement.

Surely, too, it shows the danger of giving salvarsan unless one has control of the patient, and the means of making the Wassermann test.

REMOVAL OF PARAFFIN FROM THE BLADDER *

S. D. VAN METER, M.D.
Visiting Surgeon, City and County Hospital
DENVER

The peculiar difficulties of diagnosis and the method of removal resorted to in this case, I feel, render it worthy of record.

Patient.—A man, aged 24, single, glass-blower, with negative family and personal history. Eight months ago he inserted an improvised bougie made of paraffin chewing-gum into the urethra "to relieve an irritation" near the meatus. Instead of being able to force it out, he felt it pass on deeper and glide into the bladder. At first it caused no symptoms, but after several months it began to develop signs of vesical irritation.

* Read before the Denver City and County Medical Society, September, 1911.

V. 5
1912

Examination.—When the patient consulted me he presented a classical picture of vesical calculus. Cystoscopic examination with water distention revealed nothing, but with a small quantity of water and sufficient air to complete the distention a foreign body about three-quarters of an inch in diameter and resembling a phosphatic stone was seen bobbing up and down like a buoy. Since the larger part of this body was paraffin, any attempt to remove it by litholapaxy was considered out of the question, as an instrument would not crush but only change its shape. I knew that benzin would dissolve the paraffin, if the phosphatic coating was not too thick, but the possibility of its baneful local or constitutional effect made me hesitate. The report of a case by Dr. Franz Weisz of Budapest,[1] in which benzin had been successfully used for the removal of a wax candle from the bladder, induced me to use that method in my case.

Procedure of Removal.—After the bladder had been cleaned with boric acid solution, a small quantity of which was left there, 4 ounces of benzin were injected and allowed to remain in the bladder about eleven minutes. After the bladder contents had been churned with a litholapaxy bulb, during which time the phosphatic coating was deposited in the sediment glass, the benzin was drained into a glass. It was opalescent and evidently held some of the paraffin in solution. A second instillation of benzin was injected into the bladder and allowed to remain about four minutes, when it came away much clearer than the first. A third and fourth were clear when removed. No anesthetic was used, and the procedure caused no more discomfort than the ordinary bladder exploration. No constitutional symptoms were noticed, but considerable pain was caused by irritation of the scrotum and inner aspects of the thighs, which had become soiled with benzin spilled in removing the several instillations. This soon passed away and the patient went home on the street-car, and to work two days later. There was no irritation of the bladder or urethra following the use of the benzin, which indicates that the liquid is an irritant only when conditions permit of evaporation, and that it is perfectly safe to retain in the bladder a sufficient length of time to dissolve paraffin.

611 California Building.

Therapeutics

COCA U. S. P.: ERYTHROXYLON COCA

DESCRIPTION

The official coca (genitive cocæ) consists of the dried leaves of what is known commercially as Huanaco coca or Truxillo coca, which should yield not less than 0.5 per cent. of ether-soluble alkaloids. Erythroxylon coca comes from South America, but the plant is also now found in India and some of the islands of the Indian Ocean. The leaves of the plant growing in Peru and Bolivia seem to furnish more of the alkaloid, cocain, than that growing elsewhere.

An alkaloid was discovered in this plant by Gardeke, in 1885, which he called erythroxylin. It was later studied by Niemann, who gave it the name of cocain.

The local anesthetic properties of the drug were first noticed by Moreno Y. Maiz, in 1862, again by von Anrap, in 1880, but Carl Koller, in 1884, was the first to demonstrate the practical value of the drug.

Several other alkaloids have been discovered which are named cocamin, homococamin, isococamin and homoisococamin, all of which contain, according to Cushny, a molecule of ecgonin combined with various acids. These alkaloids, however, have not as yet been found of any therapeutic interest. Tropacocain, occurring especially in the Java coca, is a combination with benzoic acid as a base, and has been recommended for spinal injections.

1. Am. Jour. Urol., December, 1909.

LOCAL ACTION

The alkaloid cocain acts locally as an anesthetic to the terminations of the sensory nerves. The action on the unbroken skin is not pronounced, although when incorporated with an oil or fat it may penetrate enough to cause some loss of sensation and dulling of pain. It is very active on mucous membranes as a local anesthetic and as a temporary contractor of the blood-vessels, and is quickly absorbed when injected hypodermatically, causing also local anesthesia of the part in which it is injected. On the mucous membrane of the nose it causes anesthesia and the loss of smell, and there is a partial loss of the sense of taste when applied to the tongue. Injected into a nerve-trunk, or near a nerve-trunk, it acts as an anesthetic to its peripheral distribution. While the sensory fibers are paralyzed or benumbed, the motor fibers may still be active, so that the muscles to which the nerve is distributed may be voluntarily called into play, though the part is anesthetized.

The anesthesia produced by cocain applied locally occurs in from five to ten minutes, and then passes off rather rapidly, the length of anesthesia depending largely on the method of application, the strength of the solution, and whether or not the parts injected or treated are incised and the injected liquid allowed to run out with the blood and be lost.

Its use as a spinal anesthetic has been described in a previous article on local anesthesia.

Cocain has been very largely used in the eye, both to dilate the pupil partially and to contract the blood-vessels of the conjunctiva. Also, it has been frequently used for eye operations. While it causes partial loss of accommodation, it is not sufficiently active to allow of a complete examination of the eye as an optical instrument. It seems to dilate the pupil by acting on the dilator fibers of the iris. As it sometimes causes an increase of intraocular tension, it should be used with great care if glaucoma is suspected or is present. It has been thought at times to retard healing after eye operations, and for that reason is not used so frequently in the eye as it was some years ago.

SYSTEMIC ACTION

A dose of cocain, which seems to represent well the activity of the drug coca, if sufficiently large to produce symptoms, shows its activity in cerebral and circulatory stimulation. The heart-beat is increased in rapidity, the blood-pressure is somewhat increased, respirations are more rapid, the pupils dilate somewhat, the patient generally becomes more talkative, and may show marked excitement and even delirium. At times, however, the first evident action of the drug is a faintness and collapse, with evidences of heart failure, as cold, clammy skin, pale face, nausea and vomiting, or there may even be cyanosis. At times tremors and tremblings occur, and convulsions have been noted. Such phenomena are perhaps due to cerebral anemia.

The drug seems to combine activities represented by atropin and by caffein, and in those who become used to its effects it seems to relieve fatigue, temporarily, at least, to increase mental activity and muscle ability, and also to relieve the sense of hunger.

Cocain seems to act largely on the medulla oblongata, stimulating its various centers, especially the respiratory center, and it is the vasomotor center stimulation that causes a rise in blood-pressure, although the increased rapidity of the heart, owing, probably, to stimulation of the accelerator mechanism, may have something to do

with this rise of blood-pressure. On the other hand, though primarily a respiratory stimulant, it is secondarily a respiratory depressant, and its depressant action on those who are not accustomed to its use occurs so soon and is often so pronounced that cocain should never be used as a circulatory stimulant.

At times it is sufficiently stimulant to the spinal cord to cause an exaggeration of the reflexes, and may even cause spinal convulsions.

There is some slight action on the blood-vessel walls as shown when the drug is injected or used locally. There is some blanching of the tissues when it is used on mucous membranes. Such action, however, does not last long, and is followed by a dilatation of the local vessels.

This is one reason why cocain so readily causes a habit in hay-fever patients when it is used locally for its benumbing and vasocontracting effect, for as soon as the effect passes off, the patient desires to use the drug again, and he soon acquires a habit. Therefore, cocain should never be given to a hay-fever patient for his own use.

Small doses of cocain have seemed to increase peristalsis of the intestines, but any circulatory depression is likely to cause inhibition of peristalsis.

While the temperature is generally increased from cocain stimulation, if there is circulatory depression the temperature is not increased.

The alkaloids of coca are more or less completely broken up in the body, so that but a small amount is excreted by the kidneys.

Action of a Therapeutic Dose or the Primary Physiologic Action.—The action of coca is that of its contained cocain, and the action of an ordinary active dose of cocain is slightly to stimulate the heart, slightly to raise the blood-pressure and slightly to stimulate the brain, causing increased mental activity, and wakefulness, slight muscle exhilaration and perhaps a general feeling of well-being. If such stimulation is frequently attained, the desire of the system for it grows until it must be taken more and more frequently and in larger doses, and a habit is acquired.

Toxic Symptoms.—Cocain may be classed as a poison among the nervous stimulants, but it quickly becomes a nervous depressant. The symptoms of acute poisoning are excitement and nervous irritability, there is more or less delirium, there may be convulsions followed by coma, the pupils are dilated, the respiration is more or less rapid and shallow, the pulse is weak and the heart rapid. On the other hand, the first symptoms may be collapse, with dyspnea and cyanosis. Death from acute poisoning with cocain has not frequently occurred, and the greatest danger seems to be within a few minutes, as if the patient lives from fifteen minutes to half an hour, he will probably recover.

TREATMENT OF POISONING

If the poison has been taken into the stomach, 1 or 2 gm. (15 or 30 grains) of tannic acid should be stirred in a glass of warm water and taken immediately. If vomiting does not soon occur, the stomach should be washed out with warm water, or an emetic should be administered. Camphor (one of the aseptic ampules of camphor solution) should be administered hypodermatically several times at fifteen-minute intervals, if indicated. Strychnin sulphate, 1/30 grain, should be given hypodermatically and repeated if needed. The patient should be surrounded with dry heat. Artificial respiration may be employed if necessary. A hypodermatic injection of 1 part to 10,000 of suprarenal active principle (aseptic ampule) should be given intramuscularly. If convulsions occur, chloroform inhalations must be given.

As cocain is rarely administered internally, and would only be taken internally by accident, the acute poisoning is more likely to occur from its absorption after local use for operative procedures, or after a hypodermatic injection to deaden pain. To be on the safe side, especially where operation will not immediately cause the injected parts to lose the solution from the incision, a dangerous dose should never be used. The 10 per cent. solutions once used are never safe. Four per cent. solutions of cocain certainly seem sufficient on mucous membranes, and 2 per cent. solutions, where the cocain is to be injected into the tissues, seem sufficient, and if a considerable amount of fluid is to be used, 1 per cent. should probably be the strength; but as above stated, it should be remembered that a poisonous dose may be 0.05 or 0.06 gram (about a grain). While more may be tolerated, much less than this amount has caused poisoning in susceptible patients. When a considerable amount of the cocain solution is used for infiltration anesthesia it should be remembered that the water alone, by distending the tissues, causes benumbing of the sensory nerves, and especially in instances in which the operative procedure is done immediately after rapid infiltration, it is the water and distention that have caused the anesthesia, and not the cocain at all. Hence, where a large area of infiltration for an operative procedure is indicated, it is best to omit the cocain from the solution.

The action of cocain locally may be prolonged and the danger of rapid absorption prevented by the addition of the suprarenal active principle in perhaps a strength of 1 to 5,000 to 10,000. If the operation is on an extremity, retardation of the return circulation by a bandage will of course prevent rapid absorption and systemic poisoning.

COCAIN HABIT

Chronic cocain poisoning, or the cocain habit, is one of the saddest of drug habits. Occasionally it is caused by the careless use of a wine of coca, or by the use of cocain inhalants or sprays or nasal powders, or anticold combinations. The dire effect of catarrh powders containing cocain is now generally understood and recognized, and legislation is attempting to eradicate and prevent this crime.

It was thought that cocain would be a safe cure of the morphin habit; it was quickly found that it was a most unjustifiable treatment of that habit. Many persons were given the cocain habit by such treatment.

The symptoms of chronic cocain poisoning are great nervousness, sleeplessness, a variability of muscular and mental activity, impaired nutrition, imperfect sight, anorexia and digestive disturbances. When a cocain habitué is in need of a dose of cocain, he is greatly depressed, and the quick stimulation of its action when he receives or takes his dose is markedly evident. From being quiet and depressed, he becomes talkative and alert. Some users of cocain, especially of the lower classes, obtain marked erotic effects. It is quite probable that cocain is often obtained and often used and the habit thus formed on account of this activity.

No treatment is effective outside of an institution, and it seems that the drug must be more or less rapidly withdrawn.

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THERAPY

Except for local action in the stomach to quiet pain from cancer, there seems to be no justifiable use of cocain internally. Even such use as this is probably rarely necessary. The use of coca wines, or fluidextracts of coca are hardly justifiable. While they cause a certain amount of mental and muscular stimulation, it should not be forgotten that the cocain habit readily develops after use of this drug.

As a local anesthetic, enough has already been said. One or 2 per cent. solutions used in the eye or on mucous membranes will certainly quiet pain, and stronger percentages become distinctly anesthetic. Its action as a sedative to the eye and as an anesthetic has already been described. It may be used as a sedative, and if partial dilatation of the pupil is advisable in glaucoma it does not cause the harm that would be caused by atropin. This dilatation is quickly overcome by a physostigmin (eserin) solution.

In painful inflammation of the ear it is often of marked benefit and gives great comfort, used locally. It is most constantly used in operations on the nose and throat. It has been largely used in dental surgery.

Watery and oily lotions of cocain are sometimes used in annoying skin irritations, as in pruritus vulvæ, and it is sometimes of benefit in painful ulcers. It should not be used on absorbing surfaces, as after a fresh burn, or the raw surface of a blister.

OFFICIAL PREPARATIONS

Cocaina occurs as crystals, prism-shaped, and has a bitter taste. It is very soluble in alcohol; almost insoluble in water. The following is the most used preparation:

Cocainæ hydrochloridum, or cocain hydrochlorid, occurs as colorless prisms or as a white crystalline powder. It is very soluble in water, and readily dissolved in alcohol. Solutions of cocain in water should not be boiled, as the alkaloid is decomposed. Consequently, it must be dissolved in previously sterilized water.

The internal dose is 0.03 gm. (½ grain). This dose should not be frequently repeated, and as above stated, there is no good reason for administering it internally, except in rare instances in acute conditions of the stomach.

Oleatum cocainæ is a 5 per cent. solution of cocain in oleic acid and olive oil. This preparation is not needed in the Pharmacopeia, as if it is advisable to use cocain in oily solution locally, it should be made fresh and of the strength desired for the individual patient.

SYNTHETIC AND OTHER SUBSTITUTES

Beta-Eucain.—In an attempt to discover some drug or synthetic combination which would act as a local anesthetic and yet not present the toxicity of cocain, a number of drugs have been offered. One of the first was eucain, but this was soon followed by beta-eucain, which was found to possess the advantages of eucain and offer less irritation, and was more permanent. The action of beta-eucain (benzoylvinyldiacetonalkamin hydrochlorid) is identical with that of cocain, except that anesthesia is slightly less prolonged, and there seems to be much less danger of toxic action. It has been said to be but one-third as toxic as cocain. A solution of it in water may be boiled without deterioration. This is not true of cocain. A 2 per cent. solution is generally satisfactory for anesthetic purposes.

A eucain (beta) lactate can also be obtained. It has probably no advantage over the hydrochlorid.

Tropacocain.—This is a compound of pseudotropein (benzoylpseudotropein) and is best used in the form of the hydrochlorid. This may be obtained from coca grown in Java, but is also prepared synthetically. It is less poisonous and less depressant to the heart than cocain, and acts for a shorter time. Its solution is supposed to be more stable, and therefore it may be sterilized.

Stovain.—This is a synthetic product (dimethylaminobenzoylpentanol) discovered by Forneau. This drug is used in the form of the hydrochlorid, and seems to be less toxic than cocain. It has been thought at times that on mucous membranes it has caused some irritant effect; otherwise it seems to act similarly to cocain as a local anesthetic, and causes anemia of the tissues.

Alypin.—This is another local anesthetic, used in the form of the hydrochlorid, but has no advantage over stovain, and is found to be quite irritant, and is nearly or quite as toxic as cocain.

Novocain.—This, one of the more recent local anesthetics (para-aminobenzoyldiethylaminoethanol), is used in the form of the hydrochlorid, and seems to be much less poisonous than the above-named drugs. It is less strong as an anesthetic, and the anesthesia does not last as long as that of cocain.

Anesthesin.—This was first offered in 1900. It is an ethylic alcohol of paramidobenzoic-acid. It is used in the form of the hydrochlorid, but it has not been found to be as efficient as the other local anesthetics.

Orthoform.—(Methyl-ester of para-aminometaoxybenzoic acid). Acts as a local anesthetic to the peripheral sensory nerves. It occurs as an odorless crystalline powder, is soluble in alcohol, slightly soluble in water. It is used mostly as a powder, or in ointment for local application to painful sores, ulcers, or burns. It has been used for painful ulceration of the mouth and larynx, and in cancer and ulcer of the stomach. The relief caused is sometimes very considerable. It seems to be non-poisonous, and may be slightly antiseptic. It may, however, cause, at times, some irritation when applied too long to a mucous membrane. The anesthetic effect lasts for a long time, perhaps many hours, and anesthesia may begin within five or ten minutes. It acts only locally, is not deeply absorbed and cannot penetrate to the deeper tissues. One-half gram (7½ grains) or even more may be given internally. It may be applied externally as a powder, or mixed with any inert substance, as starch or talcum, in any strength, or may be combined in an ointment.

Magnesium Sulphate.—This was suggested for spinal anesthesia as a substitute for cocain, as it had been found to be anesthetic to nervous tissues, and when injected into the spinal canal it produces anesthesia of the part and all of the nerves below the part to which it is applied. Thus used it often causes vomiting. The quantity used is 1 c.c. of a 25 per cent. solution for every twenty pounds of body weight.

Meltzer has shown that when injected into a nerve trunk, it paralyzes first the sensory fibers and later the motor fibers. When injected into the spinal canal anesthesia is generally prolonged, and it is therefore not suitable for surgical procedures. Some tetanus patients, however, have been so treated, and have recovered. When given intravenously, it produces a general anesthesia and death by respiratory failure. Its action may be stopped by the injection of a calcium salt, which seems to oppose its paralyzant activity.

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THE OPHTHALMIC REACTION AS A DIAGNOSTIC TEST FOR TYPHOID

Recently Austrian has described[1] an ophthalmic reaction in typhoid which may prove a valuable diagnostic aid. The reaction is similar in principle to Calmette's ophthalmic reaction in tuberculosis, and was first described in 1907 by Chantemesse,[2] who obtained positive results in each of seventy cases of typhoid and negative results in forty-nine of fifty control cases. Floyd and Barker,[3] using a modification of the same technic, obtained positive reactions in 96 per cent. of typhoid cases and negative results in 84 per cent. of controls. Other investigators have obtained a variety of results in both typhoid and control cases, and some have concluded that the reaction is not specific. Others attributed the various results to a difference in strength of the extracts of virulent typhoid bacilli which were used as an antigen in the reaction. Austrian advances the hypothesis that the patient develops a sensitiveness toward the predominating strain of the organism with which he is infected, and a relatively small degree of sensitiveness toward other strains, just as a patient produces immune bodies in large amount against the strain with which he is infected and has relatively few antibodies against other strains. Acting on this hypothesis he prepared antigen for the reaction from a mixed culture of eighty different strains. These were grown in plain bouillon for twenty-four hours and were then sedimented, washed, and killed by heating for two hours at 60 C. The mass of bacilli was then thoroughly dried and ground with sodium chlorid crystals in an agate mortar, after which it was macerated with water for three days and the watery extract precipitated by pouring into absolute alcohol. The residue was then collected, dried, pulverized, and a solution made in the proportion of 10 mg. to 1 c.c. of water. One drop of this solution dropped into the lower conjunctival sac of the typhoid fever patient produced a mild inflammation with reddening of the conjunctival membrane, and sometimes slight edema of one or both eyelids. The reaction reached its height in from six to ten hours, and the symptoms even when marked were not sufficient to cause the patient to complain of discomfort.

The report shows extensive charts in which this reaction is compared with blood cultures and agglutination tests in seventy-five cases diagnosed clinically as typhoid fever. The test was positive in seventy-one and negative in four—a much larger proportion of cases than were positive by either blood cultures or agglutination. Of nineteen tests made during the first week of the disease eighteen were positive, and the nineteenth gave also negative results by both blood-culture and agglutination reaction. Positive reactions were often secured from the third to the fifth day and in a few cases as early as the second day of the disease. In 190 controls including a great variety of febrile and afebrile conditions and twelve normal adults the ophthalmic reaction was absent without exception. The reaction was found to be present most often during the acute febrile stage, and absent most frequently during convalescence.

Austrian claims the following advantages: The technic is very simple, requiring no complicated apparatus, presupposing of course that the antigen is furnished from reliable laboratories. It is a bedside test and is available during the early stages of the disease. It causes the patient less inconvenience probably than does the taking of blood for other diagnostic purposes. Its results more closely parallel those of blood cultures than do those of the agglutination test. If the ophthalmic reaction can establish these claims it needs no other recommendation to secure its general acceptance into clinical use. We shall await with interest further reports concerning its use in routine diagnosis.

1. Austrian: Bull. Johns Hopkins Hosp., 1912, xxii, 1.
2. Chantemesse, A.: Deutsch. med. Wchnschr., 1907, xxxiii, 1246 and 1572.
3. Floyd, C., and Barker, W. W.: Jour. Med. Research, 1909, lvi, 1417.

ESTABLISHMENT OF THE EXACT SIGNIFICANCE OF BOVINE TUBERCLE BACILLI IN HUMAN DISEASE

In the years that have passed since Koch stirred up the bovine-human tuberculosis question by his repudiation of prevailing ideas, there has been no lack of careful study of the difficult problems which were brought forward thus abruptly. The heat of conflict has long since abated, the necessary refinement of methods has been developed and used long enough to yield trustworthy results, and now that many of the returns are in we find a most satisfactory and convincing agreement among investigators in all parts of the world. For all practical purposes, it would seem, we are now able to say exactly how much of a menace bovine tuberculosis is to human health and life under existing conditions.

In the first place, the evidence is conclusive that, so far as ordinary phthisis is concerned, bacilli of bovine origin are so rarely concerned as to be of very little significance. Of 709 cases in which the type of bacillus present in the sputum was studied in a way to assure the value of the results (305 of these being American, 152 Japanese and the rest European cases), the com-

pilation of Kossel[1] shows that in only two was the bovine form responsible for the condition. Both of these were English cases, and were so carefully investigated that the results seem reliable. There is also one other probable case of bovine type infection, and one case in which both human and bovine type occurred together, leaving 705 cases of pulmonary tuberculosis in which only the human type of organism was present. In other words, if the same ratio exists elsewhere, only about one in two hundred cases of pulmonary tuberculosis is of bovine origin.

With surgical tuberculosis, and particularly in infants and children, the story is very different. According to the investigations and statistical studies of Park and Krumwiede,[2] in young children from 6 to 10 per cent. of all deaths due to tuberculosis are caused by the bovine type of tubercle bacilli, the cases of tuberculous adenitis and abdominal tuberculosis of children being, indeed, more often caused by the bovine than by the human type. Even in adults a significant proportion of tuberculous infections elsewhere than in the lungs is found associated with bovine tubercle bacilli, namely, cervical adenitis, 3.6 per cent.; abdominal tuberculosis, 22 per cent.; bone and joint tuberculosis, 3.5 per cent. In lupus the British Royal Commission found a type of bacilli so different from the standard bovine and human types that its origin could not usually be determined. According to Burckhardt, those cases of joint tuberculosis in which there is a long history of infection and practically no bone involvement are likely to be of bovine origin. Surely a source of infection which causes up to one-tenth of the fatal cases of tuberculosis in children, and which, in the words of Park and Krumwiede "causes a marked percentage of the cases of cervical adenitis leading to operation, temporary disablement, discomfort and disfigurement . . . a large percentage of the rarer types of alimentary tuberculosis requiring operative interference or causing the death of the child directly or as a contributing cause in other diseases," cannot be looked on as negligible. It is no little satisfaction to be able to feel that we can speak with exact knowledge on this important subject and plan our campaign according to established facts.

1. Kossel: Deutsch. med. Wchnschr., 1911, xxxvii, 1972.
2. Park and Krumwiede: Jour. Med. Research, 1911, xxv, 313.

THE CHARACTERISTICS OF CHRONIC POISONING

"Acute intoxication is a physiologic experiment; chronic poisoning is a disease." This dictum of Straub is exemplified in a consideration of the action of any of the more familiar poisonous substances which exhibit both acute and chronic effects. Acute alcoholic intoxication, for instance, is a transitory narcosis, and at first its consequences are only temporary; chronic alcoholism brings with it permanent organic damage. In acute poisoning, mercury salts produce a gastro-enteritis or nephritis; the symptoms of the chronic variety are exhibited in disease of the central nervous system. Acute arsenical poisoning resembles cholera in its immediate effects, whereas the chronic features are subtle, like those of tuberculosis.

The enumeration of such contrasts suffices to draw attention to the disparities between acute and chronic effects of poisons. If it is asked how such anomalies of action are to be explained, the answer is not easy on the basis of present knowledge of toxicology. The distinctive features of the acute form are appreciated in many cases. The effective dose is known within reasonably narrow limits, and the observed symptoms frequently can be interpreted in their causal relations. Oxalic acid, for example, owes its toxicity to the property of combining with calcium to form an insoluble salt and thus upsetting the salt equilibrium of the organism. But when we turn to chronic forms of poisoning, the available facts leave us in the lurch. The quantities of poison involved are often seemingly insignificant; and the impression is gained, to quote Straub again, that in the genesis of chronic poison effects it is the time element rather than the quantity factor that is foremost in the process.

There are surprisingly few adequate experimental studies of chronic poisoning, if a few more prominent "favorites" like arsenic are excepted. Added interest therefore centers in recent investigations of Straub[1] on chronic lead-poisoning. The peculiar conditions pertaining in the every-day development of this condition, namely, the continued introduction of minute quantities of lead into the organism, were imitated in a most ingenious way. A deposit of an insoluble lead salt, such as the sulphate or carbonate, was introduced beneath the skin in the hope that minute fractions would gradually find their way into the circulation and be distributed. This did, in fact, take place. In the course of time the cerebrospinal symptoms of the chronic form of lead-poisoning, resembling poliomyelitis and bulbar paralysis in some respects, made their appearance. Analysis of the residual lead deposits showed an average disappearance of about 0.15 gram of lead in the case of cats exhibiting typical chronic effects. Acute symptoms were entirely absent. The transported lead was not found deposited in any special tissues such as the nervous organs, and evidently was excreted from time to time. Taking into account the period which elapsed before the effects were noted it may be assumed that a quantity of lead approximating 2 or 3 milligrams per day (for the cat) disappeared from the deposit, that is, effectively entered the organism.

If the chronic effects were characterized by an increasing accumulation of lead in the specifically affected tissues, for example, the central nervous system, until a toxic dose becomes deposited, the analogy with acute

1. Straub: Ueber chronische Vergiftungen, speziell die chronische Bleivergiftung, Deutsch. med. Wchnschr., Aug. 10, 1911, p. 1469.

poisoning would be obvious. The delay in the onset and the final outcome could be attributed to the fact that the necessary quantity of lead was only slowly available for the organism to absorb. But as a matter of fact the poison is not found abundant in specially involved tissues. It accordingly appears probable in the light of the evidence reviewed, that in chronic lead-poisoning the toxic factor consists in the feeble yet continuous current of lead traversing the body, accomplishing its destructive manifestations rather on account of its duration than its intensity.

WHAT DETERMINES THE DEVELOPMENT OF THE SECONDARY SEXUAL CHARACTERS?

There are manifold indications that the development of what are termed the secondary sexual characters is associated in some way with the characteristic sexual glands, the testes and ovaries respectively. One need only recall the imperfections of growth and the disappearance of specific peculiarities and manifestations of sex which commonly follow castration or pathologic alterations in the organs concerned here. In lieu of a more adequate explanation it has become customary to speak vaguely of their "internal secretion" as the exciting cause of appropriate sexual unfolding during the prepubertal years. The evidence has, however, been rather indirect.

Professor Steinach[1] has lately furnished experimental facts regarding the extent and nature of these regulatory functions in developing the sexual instincts. Employing rats and guinea-pigs, he has transplanted testes and ovaries into early castrates of the same or opposite sex. These tissues can maintain their integrity in the new environment; and the influence exerted on the sexual unfolding of the recipient is quite striking. In males whose testes were transplanted in early youth into a muscular region, the masculine characters and incident sexual impulses were fully developed, in contrast with the absence of these in castrated males. Steinach believes that the evolution of this masculinity is determined by "the chemical influence of an internal testicular secretion on the central nervous system." More striking even is the fact that implanted ovaries can remain intact in castrated males. They exert no favorable influence on the development of masculine characters; in fact, they tend to check this. If uterus and tubes are transplanted into such males along with the ovaries the new tissues will grow and exercise a unique effect on the male organism. Feminine characters begin to make their appearance; there are noticeable changes in the mammæ; the proportions of the body, the character of the fur coat, the tendency to lay on fat assume the features of the female of that species. Even in psychic details there appears to be a "femalizing" of the male.

The upshot of these interesting reports is that neither the somatic nor the psychic secondary sexual traits are fixed in the individual. They develop in one direction or the other under the domination of the respective glands which are present and functionally active. Great possibilities in the application of these findings loom up; but it is too early for anything more than interesting speculations.

1. Steinach: Geschlechtstrieb und echt sekundäre Geschlechtsmerkmale als Folge der innersekretorischen Funktion der Keimdrüsen, Zentralbl. f. Physiol., 1910, xxiv, 551; Umstimmung des Geschlechtscharakters bei Säugetieren durch Austausch der Pubertätsdrüsen, ibid., 1911, xxv, 723.

VEGETABLES AS A FACTOR IN THE SPREAD OF TYPHOID

The possibility of the conveyance of typhoid organisms by means of vegetables and fruits has long been suspected, and as a result of epidemiologic studies in recent years, presumptive evidence has been collected of the great probability that such foodstuffs play an important part in the transmission of typhoid infection. Typhoid fever is a rural disease; typhoid fever patients are frequently found on farms where green vegetables are cultivated for market; and, in some localities at least, the practice is prevalent of using human excreta as fertilizer to force the growth of vegetables that are intended to be eaten raw.

In studies to determine the factors responsible for the spread of typhoid fever, it is highly important to determine the viability under natural conditions of the typhoid bacillus. In recent years a number of investigators, working under different conditions, have recovered this organism from previously contaminated soil after varying periods up to fifty days, and Mair regained the organism after eighty-four days from soil inclosed by glass and moisture added. Since the longevity of the typhoid bacillus is greater in soil than in unsterilized water (from seven to thirty days in the latter), it would seem that the soil of a watershed might serve as a reservoir of infection to the stream which drains it.

The latest work on this subject is reported by Creel,[1] who, working in the Hygienic Laboratory, conducted experiments both within doors and in the open air, with exposure to rain and sunlight. Two experiments were made to correspond to natural conditions except as to the infecting material, which was artificially infected feces, no naturally infected specimen being available. Under these conditions, the typhoid organism was carried up from the soil by the growing plants, and on repeated examination the organisms were recovered from the leaves and stems up to thirty-one days. A leaf of lettuce from an infected bed yielded positive cultures after three washings, thus indicating that rainfall will not free vegetables from infected material. These results have practical significance in view of the insanitary conditions on many farms, particularly the lack of sanitary

1. Creel, R. H.: Pub. Health Rep., Feb. 9, 1912.

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privies and the common practice of using human excrement as fertilizer.

The demand for fresh vegetables being so great and the means of transportation so rapid, vegetables grown in one section may be shipped great distances and used by large numbers of persons. In view of these experiments and recent epidemiologic studies, it would appear that there is danger of the transmission of typhoid fever by this means. The inspection of truck farms therefore seems advisable, and permits for the cultivation of vegetables for public sale might properly be withheld from all farms on which improper methods of fertilizing are practiced.

LISTER*

Lister, the founder of the antiseptic method, illustrious among surgeons because of the marvelous results of his great and simple discovery, has just died at the age of 84. His family belonged to the Society of Friends and some of its members were eminent in natural science; his father achieved permanent distinction in optical science and introduced improvements of fundamental value in the construction of microscope lenses. While serving in the University College Hospital under Mr. Erichsen, Lister had occasion to observe an outbreak of hospital gangrene, which he studied closely and the parasitic nature of which he strongly suspected; he also studied minutely cases of pyemia, and was early impressed with the helplessness of surgery with respect to the prevention of these dreadful diseases. In his Huxley lecture he tells us that he used a compound microscope given him by his father in the study of histology and in the examination of materials from the diseases mentioned. On graduation in medicine he went to Edinburgh and was house-surgeon to Mr. Syme (later his father-in-law), being fascinated by the prominence he gave to the pathologic side of surgery. On finishing this service he gave an extramural course of lectures on surgery in connection with which, and by way of preparation, he carried on a series of investigations on inflammation and other subjects, which reveal a high investigative ability. In 1860 he was appointed to the chair of surgery in the University of Glasgow and it was in the Royal Infirmary of this city that he did his early epoch-making work on the methods of antiseptic surgery. In 1869 he succeeded his father-in-law in the chair of clinical surgery in Edinburgh, and in 1877 accepted the chair of surgery at King's College, London, and thus became more centrally located with respect to the surgical world at large. In 1896 he retired from active practical work, but remained interested in scientific pursuits, and from 1895 to 1900 he was president of the Royal Society. He was made the object of enthusiastic and memorable ovations at international congresses in Berlin and elsewhere, and notably in Canada in 1897, when he was the retiring president of the British Association for the Advancement of Science, and when the British Medical Association met in Montreal. His appearances in foreign countries at times became, so to speak, triumphal, and he received the highest honors ever bestowed on scientific men. In 1883 he was created a baronet and in 1897 he was raised to the peerage. Lister's writings, which are not voluminous and practically all in the form of articles for journals, are lucid and forcible; unfortunately, very little of his purely surgical work has been published. He was of kindly manners, full of dignity and strength, but modest and free from all pretense.

In order to grasp fully the significance of Lister's great achievement, it is well to recall the general conditions of surgical practice at the time when he entered on his duties as professor of surgery in Glasgow. It is true that anesthetics had been introduced shortly before and that thus the agony of surgical operations and the consequent necessity of speed had been removed, so that surgeons could venture on more intricate and difficult operations than before, but this enlargement of opportunity for the surgeon could not be fully and freely realized because of the awful mortality from wound infection. Not infrequently wound infections would rise to the height of pestilential epidemics in hospitals, and that in spite of improvements in ventilation and in cleanliness in the ordinary sense. The very name of hospital was dreaded. When Lister began his work in Glasgow the infirmary was a hotbed of septic diseases, "of which the most fearful was pyemia." He began to investigate again the nature of pyemic pus at the same time as he did his "utmost against that deadly scourge." He gave sulphite of potash internally as a prophylactic and tried by local measures to limit the contagion from one wound to another. In his own words: "I freely used antiseptic washes, and I had on the tables of my wards piles of clean towels to be used for drying my hands and those of my assistants after washing them, as I insisted should invariably be done in passing from one dressing to another. But all my efforts proved abortive, as I could hardly wonder when I believed, with chemists generally, that putrefaction was caused by the oxygen of the air.

"It will thus be seen that I was prepared to welcome Pasteur's demonstration that putrefaction, like other true fermentations, is caused by microbes growing in the putrescible substance. Thus was presented a new problem: not to exclude oxygen from wounds, which was impossible, but to protect them from the living causes of decomposition by means which should disturb the tissues as little as is consistent with the attainment of the essential object.

"It has been since shown that putrefaction, though a most serious cause of mischief in wounds, is not its only cause. In other words, it has been proved that there are microbes which produce septic effects without occa-

* A biographic sketch and picture are given on page 490 of this issue.

sioning unpleasant smell. But the principle that first guided me still retains, I believe, its full value, and the endeavor to apply that principle so as to ensure the greatest safety with the least attendant disadvantage has been my chief life-work."

It is not necessary to go into details in regard to the growth of the antiseptic method in Lister's hands. As all know, he first used phenol (carbolic acid) because it deodorized sewage and hence should be a powerful germicide; applied undiluted to compound fractures it formed a protective crust and "he had the joy of seeing these formidable injuries follow the same safe and tranquil course as simple fractures." Then came the phenol spray; phenol disinfection of hands, instruments, irrigation; and phenolized dressings, followed in due time by abandonment of the spray and of irrigation of the wound, and by other improvements and simplifications. Much labor and investigation were given also to the production of suitable suture material. Lister had the good fortune, given to but few discoverers, to witness the complete development and success of his own work, to see it utilized throughout the world.

The doctrine of antisepsis made it way slowly in Great Britain. Lister himself was shunned as a heretic in his own university. German surgeons were the first to give his teachings successful practical application, and as early as 1875, demonstrations in Lister's honor were made in Munich and Leipsic, and his monograph on the antiseptic method translated into German. Naturally the countrymen of Pasteur quickly recognized the significance of Lister's service.

With characteristic fairness and modesty Lord Lister always took pains to point out that his work really consisted in seizing on Pasteur's discoveries and applying them to surgery, as is shown by this passage from a letter by Lister to Pasteur, written in 1874:

"Allow me to take this opportunity to tender you my most cordial thanks for having, by your brilliant researches, demonstrated to me the truth of the germ theory of putrefaction, and thus furnished me with the principle on which alone the antiseptic system can be carried out. Should you at any time visit Edinburgh, it would, I believe, give you sincere gratification to see at our hospital how largely mankind is being benefited by your labors. I need hardly add that it would afford me the highest gratification to show you how greatly surgery is indebted to you. Forgive the freedom with which a common love of science inspires me."

On the occasion of the great celebration in honor of Pasteur in 1892, there occurred a memorable incident which, we are told, softened the hearts of all: As Lister finished his congratulatory address on the behalf of the Royal Societies of London and Edinburgh, Pasteur rose and embraced him, and, writes Pasteur's biographer, "the sight of these two men gave the impression of a brotherhood of science laboring to diminish the sorrows of humanity."

In a discussion of the application of the microbic theories to practical surgery, Richet points out there was a time when erysipelas, purulent infection and hospital gangrene struck down those on whom operations had been made, and when puerperal infection claimed a terrible number of victims. It would seem now as if the medical profession before 1868 was blindfolded and that its blindness was almost criminal; it is a sad record indeed, but we must look at it coolly, in order to understand what the auxiliary sciences can do for medicine. Left to their own resources, practitioners during long centuries could do nothing against erysipelas and the other wound infections, but with the powerful aid of bacteriology, surgery was able to triumph over these odious diseases and relegate them to the past. It should be borne in mind that while Lister did, as he said, nothing else than to realize clearly the vast importance of Pasteur's discoveries, and to work out their practical application with untiring skill, singleness of purpose and earnestness, animated by a pure love of humanity, yet he first saw the great importance of Pasteur's work "because he was watching on the heights, and watching there alone." Aided by anesthesia, Lister's methods became the most powerful agency in the wonderful development of surgery; to the surgeon's craft it was the one thing needful; by his perfection of operative practice he advanced every branch of the healing art and brought relief of suffering with prolongation of life to all parts of the world.

Current Comment

WHAT'S SAUCE FOR THE ECUADOR GOOSE IS SAUCE FOR THE AMERICAN EAGLE

Dispatches from Washington announce, with appropriate headlines, that

> Guayaquil, the "pesthole of the Pacific"—the clearing-house of the western hemisphere for cholera, yellow fever, small-pox and the bubonic plague—is to be cleansed. Uncle Sam has decided to force its sanitation; if the end sought cannot be accomplished by courteous diplomatic means, the star-spangled avuncular personage will drop in on Ecuador and do the job in his own thorough way.

This is well, nor will any right-minded person fail to rejoice that insanitary ports have been recognized as of sufficient importance to a nation to be made the subject of diplomatic representations. Surely yellow-fever germs, cholera-polluted drinking-water and disease-bearing mosquitoes are quite as deadly and as worthy of international notice as are dum-dum bullets, submarine mines in peaceful harbors, or torpedoes floating in the track of commerce, all of which are forbidden by civilized nations. The recognition of the rights of one nation to insist on proper sanitation in the ports of its friendly neighbor will constitute a distinct advance in international comity. But—is Uncle Sam prepared to accept the logical consequences of this invitation? If Secretary Knox, by diplomatic representation, can insist that Ecuador shall make Guayaquil sanitary, why cannot

the Italian secretary of state insist that the United States compel Pittsburgh to furnish pure drinking-water for the Italians working in the steel-mills? Why cannot Russia insist that the United States clean up the tuberculosis-breeding tenements of Greater New York, in which thousands of Russians cough their lives away? The situation is worth considering. The advanced ground taken by our Department of State is distinctly in line with the march of civilization. But can the United States with consistency force little Ecuador to clean up her one sea-port when, in our own cities, thousands are dying each year from preventable causes? Would it not be well for Uncle Sam to clean up some of his own cities "in his own thorough way" as an object lesson to his little South American neighbors as to how the work should be done?

NOSTRUM-RESTRICTION A LIVE ISSUE

In our Department of Book Notices this week are reviewed two books bearing on the exploitation of nostrums in Russia and Sweden, respectively. Their appearance adds to the evidence that this question is a live issue all over the world and that its solution is believed to lie in popular enlightenment. It is interesting to note that a part of the method of attack of the problem in Russia is the autocratic restriction of nostrum advertisements; in more democratic countries the growth of public opinion has to be depended on for similar results. The success of the European campaigns against nostrums is due in no small part to a praiseworthy cooperation between the medical and the pharmaceutical professions.

A COMBINATION OF "ETHICAL PROPRIETARY" MANUFACTURERS

The "patent-medicine" makers long ago realized the value of organization and combined to form the Proprietary Association of America. How this association fought the enactment of laws that should protect the public from the evils of nostrums and quackery; how it spent money like water to lobby against legislation that every right-thinking man knew was needed; how it attempted to mold public opinion by means of faked statistics; how it tried to poison the public mind against the medical profession—all these things have been the subject of repeated comment. Now we learn that the manufacturers of the "ethical proprietaries" have taken a leaf out of the "patent-medicine" men's notebook; they, too, have organized within the last few days and have formed the National Association of Manufacturers of Medicinal Preparations. Most of the large manufacturing pharmaceutic houses have joined it. This organization, like its "patent-medicine" prototype, has apparently been created with but one object in view, to make money, honestly if possible, but to make money! This, at least, we gather from the very full report, given in the *Oil, Paint and Drug Reporter*, a conservative and reliable publication, of the meeting at which organization was accomplished. The representatives of various pharmaceutic houses met in New York and were in session two days. In these two days the association went on record as opposing the modification of the Food and Drugs Act, recommended in President Taft's special message, which would prevent "cancer cure" fakers and others in similarly disreputable businesses from publishing lies on the labels of their nostrums. In other words, the members of the National Association of Manufacturers of Medicinal Preparations seem to believe that a person should be allowed to make all the false statements he pleases, providing he confines his lying to therapeutic effects. The association also opposes the Richardson bill, which is one of the bills before Congress drawn for the purpose of strengthening the Food and Drugs Act. It further went on record as opposing the Mann bill, which would regulate the transportation of habit-forming drugs. The association registered a strong protest against Senate Bill 4727, which would require the weight or measure of all drugs sold in package form to be plainly printed on the label. Finally, the association admitted that it was organized for the purpose of opposing the campaign against ready-made mixtures. In fact, taking it by and large, it is difficult to see that the ethical stand of this organization of manufacturers of "ethical proprietaries" is in any degree higher than the stand taken by the manufacturers of "patent medicines."

THE CHOICE OF A MEDICAL SCHOOL

A Southern medical journal takes exception to an editorial under the above title which appeared in these columns some months ago,[1] on the ground that it was misleading, and that it discriminated against those medical schools which do not require a certain amount of preliminary education for admission. The purpose of the editorial was to point out to the prospective medical student the requirements of certain state licensing boards, and to give such information as would enable him to select intelligently the school he should attend; for on this might depend his success or failure as a physician. It was shown that five states — Colorado, Indiana, Iowa, Minnesota and North Dakota—demanded two years of college work as a minimum requirement, and that four states — Connecticut, Kansas, South Dakota and Utah — demanded one year of college work. Attention was drawn to the facts that many states require simply a diploma from a "recognized" or "reputable" medical college; that others have adopted the standards of the Association of American Medical Colleges; and that still others are guided by the classification of colleges prepared by the Council on Medical Education of the American Medical Association. If this was discrimination it was the right kind of discrimination; certainly it was not unfair. It was the analysis of the present situation in medical licensing, and was for the benefit of the student who desired to make a wise choice of a medical school. If a certain preliminary education is required for a license in certain states, certainly the time for the student to know it is before he begins his medical course and not at the time he applies for his license. It is likewise true that if a college does not give a course acceptable in the state where a student desires to practice, the time for the

1. Sept. 30, 1911, p. 1138.

student to know it is before he begins his course and not at the time he applies for his license. Considering what the thoughtless choice of a college means to the student, there is nothing misleading in the last sentence of the editorial mentioned, and which we will emphasize by repeating: "Disappointed indeed will be that student who, after having spent a large amount of time and money, finds on graduation that his diploma is not recognized in a large number of states."

A NEW URINARY CONSTITUENT IN CYSTINURIA

A few unique anomalies of metabolism, notably alkaptonuria and cystinuria, have attracted attention quite as much because of the interpretation which they lend to the normal disintegration of protein in the body as on account of the pathologic features involved. From the fact that certain diamins, cadaverin and putrescin, characteristic of the putrefaction of proteins, frequently are found in conjunction with cystin in the urine of patients, it has at times been assumed that there is an essential connection in cystinuria between alimentary putrefactive changes and the output of characteristic abnormal excretory products. Cystinuria, however, has been regarded of late rather as an abnormality of protein metabolism in which the amino-acid cystin—a typical degradation product of albuminous substances—is not further broken down and oxidized as ordinarily. This view is strengthened by the simultaneous finding of other amino-acids, leucin and tyrosin, in certain cases. The latest novelty is the discovery of another amino-acid, lysin (diamino-caproic acid), in the urine of a patient with cystinuria.[1] Since this compound is known to be the mother substance of cadaverin, the intimate interrelation of the various observed constituents is further emphasized. Taken together, the accumulated data strengthen the conception of cystinuria as a condition in which the usual progress of protein catabolism is profoundly inhibited. One by one the unused fragments are cropping out as new cases become available for study.

RECOMPENSE

Periods of depression and of pessimism are inevitable. After receiving a particularly large batch of nostrum advertisements of the worst type, we are fain to ask: Is it worth while? And then in the next mail, perhaps, comes a letter like this and the question is answered:

"At times, you may perhaps wonder just what effect your exposure work is having. I want to give you an experience for your personal information. Some time ago, I was talking to a neighbor whose married daughter . . . had been taking Cora B. Miller's headache tablets for some time. She used them for headaches, pains in any part of the body, even for sleeplessness. Several weeks before, she had an ulcerated tooth, and in five days took what was estimated to be over 200 grains of acetanilid—although she did not know it. She had symptoms of acetanilid poisoning. The Cora B. Miller exposure pamphlet, and later the government bulletin on headache remedies caused her to stop at once. She borrowed all the pamphlets I had, had the neighbors read them and even sent the 'Great American Fraud' to her old home. One neighbor threw a bottle of Bromo-Seltzer out at once. I know personally that eight people, who had been using all kinds of 'patent medicines' freely, stopped at once, for good. Just this week, some people who visited them asked to have another copy of the 'Great American Fraud' sent to Kansas. So it must have done some good."

This from a layman in the sparsely settled state of New Mexico. It is not assuming too much to believe that a similar leaven is working throughout the whole of this great country. And if it is, is it any wonder that nostrum venders and quacks are moving heaven and earth to discredit the organization — the American Medical Association — that is responsible for turning on the light?

1. Ackermann and Kutscher: Ueber das Vorkommen von Lysin im Harn bei Cystinurie, Ztschr. f. Biol., 1911, lvii, 355.

Medical News

DISTRICT OF COLUMBIA

Personal.—Dr. John B. Nichols has succeeded Dr. Joseph S. Wall, resigned, as a member of the Board of Medical Supervisors.——Dr. Harry S. Lewis has succeeded Dr. Ernest P. Magruder, retired, as superintendent of the Emergency Hospital, Washington.

New Officers.—Medical Society of the District of Columbia: president, Dr. John B. Nichols; corresponding secretary, Dr. Thomas C. Smith.——Section on Eye, Ear, Nose and Throat of the Medical Society of the District of Columbia: president, Dr. Charles M. Hammett; secretary, Dr. George H. Heitmuller.

Board of Charities Assailed.—The District Medical Society and the committee on public health of the Chamber of Commerce, at meetings held January 24, went on record as bitterly opposed to the recommendation of the Board of Charities to Congress providing for the separation of the public and private charities of the district, and the establishment of a municipal hospital with first-aid stations.

Smoker to Local Profession.—An informal smoker was given at the Naval Medical School in honor of the local medical profession, January 26, by Surgeon-General Charles F. Stokes and medical officers on duty in the Navy in Washington. About two hundred guests were present. Dr. Stokes described the newer activities of medical officers of the Navy, with especial attention to the importance of the detection and elimination of errors in the vision of gun-pointers, and also to occupational disabilities. Medical-Director Henry G. Beyer then gave an interesting account, illustrated by lantern slides, of the International Hygiene Exhibition held recently in Dresden.

GEORGIA

New Officers.—Elbert County Medical Society: president, Dr. Claude E. Earle; secretary-treasurer, Dr. Luther P. Eberhardt, both of Elberton.

Fire in Hospital.—Fire in the Macon Hospital, January 30, necessitated the removal of the patients from the hospital to the sanatorium of Dr. Howard J. Williams. This was done by the resident staff, nurses, members of the fire department and general public, without casualty.

Personal.—The governor has named the following physicians as members of the board of trustees of the State Sanatorium, Milledgeville: Drs. J. C. Jarnigan, Warrenton, and Thomas R. Wright, Augusta.——Dr. Kingman P. Moore, for fifteen years a member of the staff of the Macon Hospital, has resigned. ——Dr. Obe C. Gibson has been made city physician of Macon, vice Dr. Joseph W. DuGuid.——Drs. John S. Wells, Griffin, and Charles W. Miller, Atlanta, have been appointed members of the state eclectic medical board to fill vacancies.——Dr. William L. Gilbert has been reelected president of the Atlanta Board of Health and Dr. Willard E. Quillian has been elected vice-president.——Dr. Clarence B. Greer, Atlanta, has succeeded Dr. James Edgar Paullin, Atlanta, as pathologist of the state board of health.——Robert F. Maddox, formerly mayor of Atlanta, has been appointed a member of the state board of health to represent the Fifth congressional district, vice Dr. Willis F. Westmoreland, Atlanta, resigned.——Drs. Nicholas Peterson, Tifton, and Frederick D. Paterson, Cuthbert, have been appointed members of the state board of medical examiners, succeeding Drs. John L. Walker, Waycross, and Samuel S. Gaulden, Quitman.

ILLINOIS

Chicago

Personal.—Dr. Henry B. Favill was one of the guests at the dinner given to the President and Mrs. Taft, by the Secretary of the Interior and Mrs. Walter Fisher at Washington on the evening of February 8.

The Ferguson Memorial.—Memorial exercises were held by the Chicago Medical Society, February 7, for the late Dr. Alexander Hugh Ferguson, president of the society last year. Dr. Joseph M. Patton, president of the society, made the introductory address, and eulogistic remarks regarding Dr. Ferguson were made by Dr. Andrew McDermid, who discussed Dr. Ferguson's early history; by Dr. Albert J. Ochsner, who spoke on Dr. Ferguson's place in surgery; by Dr. Edward F. Wells, who considered "Dr. Ferguson—the Man"; by Dr. Reginald H. Brett, Banff, Alberta, who gave a sketch of Dr. Ferguson's medical career in Toronto and Winnipeg; by Dr. Homer M. Thomas, who gave reminiscences of Dr. Ferguson, and by Dr. Liston H. Montgomery, who spoke of the genial friendship of Dr. Ferguson.

KANSAS

State Society Meeting.—At the meeting of the executive council of the State Medical Society, held January 10 in Topeka, it was decided to hold a two-day meeting in May at Hutchinson, with a banquet. Dr. James W. May, Kansas City, was elected editor of the *Kansas Medical Society Journal*.

New Officers.—Shawnee County Medical Association, January 29: president, Dr. Samuel A. Johnson; secretary, Dr. Chester E. Joss, both of Topeka.——Cloud County Medical Society, January 22: president, Dr. Frank A. McDonald; secretary, Dr. Edwin N. Robertson, both of Concordia.——Cowley County Medical Society, January 17: president, Dr. Leon A. Jacobus, Winfield; secretary, Dr. Clifford R. Spain, Arkansas City.——Harvey County Medical Society: president, Dr. Richard S. Haury; secretary-treasurer, Dr. Frank L. Abbey, both of Newton.——Franklin County Medical Society, January 31: president, Dr. John B. Davis; secretary-treasurer, Dr. Willis L. Jacobus, both of Ottawa. At the ninth annual banquet held in connection with this meeting, responses to toasts were made by the wives of the members of the society.

KENTUCKY

Medical Journal Sold.—Dr. John W. Wainwright, New York, has purchased the *American Practitioner and News*, founded in Louisville forty-five years ago by Dr. David Yandell, and will move its headquarters to New York.

New Officers.—Clark County Medical Society, January 16: president, Dr. Ernest Cole; secretary-treasurer, Dr. David H. McKinley, both of Winchester.——Hardin County Medical Society: president, Dr. D. Elmo McClure, Sonora; secretary-treasurer, Dr. Edward J. Strickler.——Kentucky Midland Medical Society, January 11: president, Dr. Charles G. Daugherty, Paris; secretary-treasurer, Dr. Charles C. Garr, Lexington.——Fayette County Medical Society: president, Dr. Claude W. Trapp; secretary, Dr. Lee C. Redmon, Lexington.

Personal.—Dr. Moses L. Murphy, Louisville, sustained cuts and bruises in a collision between his automobile and a street car, February 4.——Dr. L. S. Duncan, Louisville, has been commissioned major in the Medical Corps, N. G. Ky., and assigned to the First Infantry.——Dr. Llewellyn P. Spears, Louisville, has been commissioned captain and Dr. Albert A. Stoll, Louisville, Lieutenant, M. C., N. G., Ky., and assigned to the same command.——Dr. Walter O. Bullock has succeeded Dr. James C. Carrick as president of the board of health of Lexington.

Hospital Notes.—Lexington, which has been paying St. Joseph's Hospital and the Good Samaritan Hospital, each $10,000 a year, for taking care of the sick of the city, is proposing to purchase the building of the Good Samaritan Hospital for $11,500 and to equip in that building a city hospital. It is also proposed to improve the eruptive hospital, near Lexington, by constructing at a cost of $3,000 a number of small buildings for the care of those suffering from tuberculosis and other communicable diseases.——The Louisville Hospital Commission has awarded the contract for the new City Hospital to a Toledo firm for $4,000,000.

LOUISIANA

Antituberculosis League Meeting.—At the annual meeting of the Louisiana Antituberculosis League in New Orleans, Dr. George Farrar Patton was reelected president; Drs. Adolph Henriques and Miss Kate Gordon were elected vice-presidents; Dr. Arthur I. Weil was elected secretary and Dr. George S Brown, treasurer.

Colored Ward for Charity Hospital.—The board of administrators of Charity Hospital, New Orleans, is having plans made for a $32,000 building to be used as a ward for colored females.——The benefit fund of the hospital, for which an active campaign was made in December, it is announced, amounts to more than $40,000.

The State Health Train.—The Louisiana State Board of Health exhibit and demonstration train will start on its second tour of the state of Louisiana, leaving Baton Rouge March 4.——The train was sent to Shreveport, January 17, to be held there awaiting possible developments in the cerebrospinal meningitis situation.

The Honor System at Tulane.—The freshman class of Tulane University, Medical Department, has adopted the honor rule, which is in force throughout the university. A member of the class has been tried recently for violating the honor system during an examination, and the class committee has reported the case to Dr. Isadore Dyer, the dean, with a recommendation that the guilty individual be expelled.

New Officers.—Tangipahoa Parish Medical Association, January 17: president, Dr. Glenn J. Smith, Amite; secretary, Dr. William T. Newman, Independence.——Rapides Parish Medical Society, January 8: president, Dr. Eugene L. Henry, Lecompte; secretary and treasurer, Dr. James A. White, Alexandria.——Orleans Parish Medical Society, January 8: president, Dr. Eugene H. Walet; secretary, Dr. M. Thomas Lanaux, both of New Orleans.——Shreveport Medical Association: president, Dr. J. Ashton Blanchard; secretary, Dr. Jacob M. Bodenheimer.

Health Board Shows Moving Pictures.—Under the auspices of the Louisiana State Board of Health, Dr. Rudolph H. Von Ezdorf, Mobile, Ala., U. S. P. H. and M.-H. Service, delivered a lecture at Shreveport, January 31, on the meningitis epidemic. At this lecture several reels of motion pictures, describing the work of the State Board of Health, were exhibited. A second lecture was given in Shreveport, February 6, at which still other motion pictures describing the work of the board for the improvement of health and sanitary conditions were shown.

Sanatorium Notes.—The Charity Ward Association, Baton Rouge, took over the management of the Baton Rouge Sanitarium, February 1. The sanatorium and hospital, made possible at Monroe by the will of the late Reverend L. Enaut, is to be erected at Wood and Jackson streets. A donation of $10,000 additional has been secured by the Franciscan Sisters from France.——The Lafayette Sanitarium buildings have been completed and turned over to the Sanatorium Association, of which Dr. John E. Mouton is president and Dr. Frederick R. Tolson, vice-president.

Dr. Dowling in Quarantine.—Dr. Oscar Dowling, president of the Louisiana State Board of Health, on his return from an investigation from Dallas, Fort Worth and Waco, where he had been investigating the epidemic of cerebrospinal meningitis, was arrested at the Shreveport Union Depot, kept under guard for three hours, then placed in the detention camp until the mayor ordered his release.——Dr. Dowling reports that the Texas situation is greatly improved and that further spread of the disease is not now feared. He recommends the generous applications of antiseptics, cleanliness of the mouth and nasal passages, immediate quarantine of the patient and complete disinfection of the premises in all cases of the disease.

The Sickles Fund.—The Sickles Fund Commission, at its meeting January 30, adopted the report of the special committee relative to the dispensing of medicine at the headquarters in the Charity Hospital. It was stipulated that no patients at the Charity Hospital should be eligible to receive free medicine from this fund, and the Charity Hospital pharmacopeia was adopted as the standard. It was decided to exclude all patent and proprietary medicines, antitoxins, dressings and appliances of all kinds from the free prescriptions. The applicants for medicine must be bonafide residents of New Orleans and worthy, these facts being certified to by the prescribing physician. The hours for dispensing medicine were fixed at 8 to 10 a. m. and 2 to 4 p. m. daily.

Personal.—Dr. Creighton Wellman, New Orleans, has sailed for Panama, February 3, to make special study of the methods and the results of sanitary measures now in force in the Canal Zone.——Dr. Louis A. Meraux, New Orleans, has been made president of the St. Bernard Board of Health.——Drs. Louis Abramson and James F. O'Leary have resigned as members of the Shreveport Board of Health.——Dr. Stephen L.

Powlett, Hammond, and Dr. Robert F. Brooks, Ruston, are reported to be critically ill at their homes.——Dr. Edith Loeber Ballard has been appointed assistant in clinical obstetrics and Dr. Mary Elizabeth Bass assistant in the department of pathology in the Tulane Medical College. Dr. Robert A. Davis has been appointed clinical assistant in ophthalmology; Dr. Marion E. Brown, assistant in clinical medicine, and Drs. William D. Phillips, M. Thomas Lanaux, Jacob W. Newman and Ephraim D. Friedrichs, assistants in clinical obstetrics.——Dr. Oscar Dowling, Shreveport, has returned from a trip to Cuba.——Drs. Isadore Dyer, Abraham L. Metz and Creighton Wellman, New Orleans, have been elected to the Senior Scholastic Society of Stars and Bars.

MARYLAND

New Officers.—Harford County Medical Society, January 25: president, Dr. Armfield F. Van Bibber, Bel Air; secretary-treasurer, Dr. Charles Bagley, Bagley.

Personal.—Dr. Brice M. Goldsborough, Cambridge, has returned from Florida, restored to health.——The residence of Dr. J. Clement Clark, superintendent of the Spring Grove Hospital for the Insane, Sykesville, was destroyed by fire recently.

State Lunacy Commission.—The state lunacy commission has asked an appropriation of $800,000, one-fourth of which is to be used on the purchase of land and the construction of buildings for the state hospital on the Eastern Shore. Two years ago the legislature appropriated $600,000 to the commission.

Hospital Association Report.—The sixth annual report of the Washington County Hospital Association, Hagerstown, shows receipts of $19,494 and a balance of $2,124. During the year 283 patients were admitted and 220 operations were performed. The mortality for the year was twenty. Of the patients, fifty-four were free. The association has recently purchased Kee-Mar College, which after renovation, will be occupied by the hospital.

Antituberculosis Car.—The Baltimore and Ohio Railroad has fitted up an antituberculosis car for the use of the Maryland Association for the Prevention and Relief of Tuberculosis. This car will visit the towns of Maryland to aid in carrying on an educational campaign looking toward the eradication of tuberculosis. The car is to be at the Mount Royal Station, Baltimore, the week of February 19-24 for inspection by the delegates of the Health Congress, which will be in session at that time in Baltimore.

Bills Introduced in the Legislature.—Two important bills from Baltimore County have been introduced in the legislature and are approved by the physicians of the county. The first provides for a sewerage system and disposal plant, the expense of which is to be borne by those directly benefited, and the second repeals the law providing for health officers, and substitutes therefor one health officer, who shall be a practicing physician, who shall receive a salary of $3,000 per annum, and who shall be required to restrict himself to his duties as health officer.

Baltimore

Book and Journal Club.—The annual meeting of the Book and Journal Club was held February 6. Dr. Charles G. Cumston, Boston, was the guest of the evening and read a paper on "Felix Plater." The club has eighty members and expends its funds for the purchase of current journals for the library of the Medical and Chirurgical Faculty of Maryland. The receipts last year were about $442, and the expenses about $400.

The Finney Dinner.—At the Finney dinner, February 7, Dr. William S. Thayer acted as toastmaster. The committee in charge of the Finney Fund, who are obtaining subscriptions for a memorial to the illustrious surgeon, is composed of Drs. Samuel T. Earle, William A. Fisher, Jr., Harry Friedenwald, Julius Friedenwald, Louis P. Hamburger, George W. Mitchell, Herbert Harlan, M. Gibson Porter, William S. Thayer, Richard H. Follis, Carey B. Gamble, James M. H. Rowland, Charles E. Simon, Henry B. Thomas, Hiram Woods, Jr., and Henry M. Thomas. The subscriptions are not limited to medical men, but are from all friends of Dr. Finney.

Personal.—Dr. Henry Chandlee is spending the month of February in Bermuda.——Dr. Abraham Samuels, on account of ill health, has been obliged to give up practice and has gone to the Adirondacks.——Dr. Lillian Welsh, professor of physiology and hygiene in Goucher College, has been appointed special lecturer on hygiene to the women students of the University of Michigan.——Dr. Herbert Harlan has been appointed surgeon-general of Maryland.——Dr. Henry Barton Jacobs was reelected president of the Eudowood Hospital for Consumptives, February 7.——Dr. William S. Thayer was elected president of the Harvard Club of Maryland, February 8.

MICHIGAN

Appropriation to Fight Scarlet Fever.—The city council of Detroit has voted to take $10,000 from the contingent fund to carry on the work against scarlet fever for the balance of the fiscal year.

New Officers.—Michigan Health Officers' Association, January 30-31: president, Dr. Guy L. Kiefer, Detroit; secretary, Dr. Robert L. Dixon, Lansing.——St. Joseph County Medical Society, January 31: president, Dr. Thomas D. Givan, Three Rivers; secretary-treasurer, Dr. Samuel R. Robinson, Sturgis.

Appreciate Entertainment.—As a token of appreciation of the entertainment furnished the State Medical Society at its meeting in Detroit in 1911, Dr. Frederick C. Warnshuis, Grand Rapids, president of the state society, presented the Wayne County Medical Society with a mahogany grandfather's clock, February 5. The gift was accepted on the part of the Wayne County Society by Dr. Henry O. Walker.

Medical Building Doomed.—The Board of Regents of the University of Michigan, at their meeting January 26, voted the razing of the old medical building at Ann Arbor. This is the third time the matter has been voted on by the board, but each time the alumni have protested so strongly that the matter has been reconsidered. The work of demolition of the building will begin in a short time.

Personal.—Dr. William T. S. Gregg, Calumet, has accepted a position on the medical staff of the Calumet-Hecla Company.——Dr. Jason Morse, for twenty-five years a member of the staff of the Pontiac State Hospital, has resigned, and after a trip to the Canal Zone, will locate in Los Angeles.——Dr. Allan M. Wilkinson, Charlevoix, was presented with a seal ring by his Bible class, January 25.——Dr. Robert J. Baskerville, Detroit, was struck by an automobile, January 31, and painfully injured.

MINNESOTA

Sanatorium Soon Ready.—The St. Louis County Sanatorium for Tuberculosis is almost completed and will probably be ready to receive patients March 1.

Hospital Fire.—Cloquet Hospital, Carlton County, was destroyed by fire February 2. The patients were all removed in safety and no casualties occurred.

Gift to University Library.—The University of Minnesota Library has received nearly 15,000 pamphlets and periodicals as a donation from the Ramsey County Medical Association.

Branch Health Laboratory Opened.—A branch laboratory of the State Board of Health has been opened in Mankato, in charge of Dr. Chelsea C. Pratt, who has been connected for six years with the state board laboratory in St. Paul.

Increase in Health Department Appropriation.—The Minneapolis City Council Health and Hospital Committee has approved the appropriation of $140,800 for the health department, about $12,500 more than the amount required for 1911.

Small-Pox in State Hospital.—Small-pox is reported to have broken out at the State Hospital for the Insane, Fergus Falls. Two attendants have been placed in the contagious ward and all precautions possible are being taken to prevent the spread of the disease to the inmates.

Personal.—Dr. John A. McCuen has been elected mayor of Duluth.——Dr. Henry M. Bracken, Minneapolis, secretary of the State Board of Health, has returned from a study of hospitals in the east and will leave for Europe by April 21, to make a special study of municipal abattoirs.

Medical Building.—John Gateley of New York has announced that he is about to erect a ten-story building, designed for offices for physicians and dentists, on Seventh Street, between Nicollet and Hennepin Avenues, Minneapolis. The project is said to have been approved by the Hennepin County Medical Association and construction work will start early in June.

New Officers.—Ramsey County Medical Association, February 5: president, Dr. Thomas W. Stumm; secretary-treasurer, Dr. Charles E. Smith, both of St. Paul.——Blue Earth County Medical Society: secretary, Dr. Gerhard A. Dahl, vice Dr. Jane C. Hughes, resigned, both of Mankato.——Hennepin County Medical Society, January 8: president, Dr. Charles H. Bradley; secretary-treasurer, Dr. Edgar J. Huennekens, both of Minneapolis.——Upper Mississippi Medical Association: president, Dr. Charles F. Coulter, Wadena; secretary, Dr. George H. Lowthian, Akeley.——Southern Minnesota Medical Association, January 16: president, Dr. John H. James, Man-

kato; secretary, Dr. William T. Adams, Elgin.——Park Region Medical Society, January 17: president, Dr. A. Dair Haskell, Alexandria; secretary-treasurer, Dr. A. Mason Randall, Ashby.——Waseca County Medical Association, January 8: president, Dr. William M. Cory, Waterville; secretary-treasurer, Dr. William A. Meiliche, Janesville.

Free Popular Lectures.—A series of public lectures, free to the public of Minneapolis, is being given under the auspices of the Hennepin County Medical Society at the Minneapolis Public Library. The first lecture was given on January 20 on the "Healthful Citizen in a Healthful Community." The second on January 27 on "Play and Supervised Play; Its Part in the Education and Well-Being of the Child." On February 10, "The City's Vice and Its Vicious Classes," were discussed and a commentary was given on the report of the Vice Commission. The succeeding lectures will be given on February 24 on "Types of Children, Their Care and Training in the Home and School." On March 9, "Why Not Know, or Lessons in the Early Diagnosis of Disease," is to be the subject, and on March 23, the "Hygiene of Sex" will be discussed; a talk to men being given at the Public Library, and on the same day a talk to women on "The Dangers of Womanhood," in the lecture room of the Church of the Redeemer.

MISSISSIPPI

New Officers.—Holmes County Medical Society, at Lexington, January 9: president, Dr. Marquis L. Pollard, Thornton; secretary-treasurer, Dr. Stephen A. Eggleston, Lexington.——Tri-County Medical Society, at Brookhaven: president, Dr. John T. Butler; secretary-treasurer, Dr. Dudley W. Jones, both of Brookhaven.——Attala County Medical Society: president, Dr. John J. Howell, McCool; secretary-treasurer, Dr. John W. Allen, Kosciusko.——Choctaw County Medical Society: president, Dr. William D. Arnold; secretary-treasurer, Dr. Allen R. Nason, both of Ackerman.——Clarke-Wayne County Medical Society: president, Dr. James A. McDevitt; secretary-treasurer, Dr. Albert P. Hand, both of Shubuta.——Harrison County Medical Society: president, Dr. Burl S. Hood, Bond; secretary-treasurer, Dr. Benton Z. Welch, Biloxi.——Jackson County Medical Society: president, Dr. J. I. Evans, Pascagoula; secretary-treasurer-delegate, Dr. Jacob N. Rape, Moss Point.——Jones County Medical Society: president, Dr. William S. Cranford, Laurel; secretary-treasurer, Dr. W. S. Harper, Wisner.——Lawrence-Jefferson Davis Medical Society: president, Dr. George A. Teunisson, Monticello; secretary-treasurer, Dr. Benjamin S. Waller, Silver Creek.——Leflore County Medical Society: president, Dr. H. L. Shannon, Itta Bena; secretary-treasurer, Dr. William B. Dickens, Greenwood.——Marshall County Medical Society: president, Dr. George E. Johnson, Hudsonville; secretary-treasurer-delegate, Dr. William C. Elliott, Holly Springs.——Prentiss County Medical Society: president, Dr. James C. Vandiver, Wheeler; secretary-treasurer, Dr. Josiah S. Wheeler, Booneville.——Tate County Medical Society: president, Dr. Reuben D. Williams, Learned; secretary-treasurer, Dr. William D. Smith, Senatobia.——Washington County Medical Society: president, Dr. Thomas F. Wilson, Arcola; secretary-treasurer, Dr. Joseph J. Ferguson, Greenville.——Yalobusha County Medical Society: president, Dr. Samuel E. Cooper, Water Valley; secretary-treasurer, Dr. Ollie G. Coleman, Coffeeville.

MISSOURI

New Officers.—Kansas City Academy of Medicine, February 3: president, Dr. Samuel S. Glasscock; secretary, Dr. Paul V. Woolley.——Lewis County Medical Society, January 30: president, Dr. Thomas F. McGlasson, Lewistown; secretary, Dr. Paul F. Cole, Steffenville.

College Sues State Board.—The College of Physicians and Surgeons of St. Louis is said to have brought suit against the Missouri State Board of Health for $200,000, because of its action taken in withdrawing recognition from the college, alleging that such action was based on trivial reasons.

Antituberculosis Society Incorporated.—The Buchanan County Society for the Relief and Prevention of Tuberculosis has made application for a pro forma decree of incorporation. The officers named in the application are James H. McCord, president; Dr. Oliver G. Gabbart, secretary, and J. G. Schneider, treasurer.

Hospital Note.—A sub-dispensary under the Kansas City Health Department is to be established in the eastern portion of the city, probably in the Baptist Hospital, principally for the convenience of school children who need medicine and are unable to pay for it and who otherwise would be obliged to go to the City Hall.

Hospital Staff Organizes Society.—The staff of the Swedish Hospital, Kansas City, has organized the Medical-Surgical Society for the purpose of stimulating the scientific productiveness of the members of the staff. Meetings are held on the third Tuesday of every month in conjunction with a dinner served at some restaurant in the city. At the first meeting held January 18, a paper was read by Dr. Francis M. McCallum on "The Most Recent Research on Kidney Function"; Dr. Harold P. Kuhn demonstrated a new "Unit Sterilizer" for use in the operating room, and Dr. Arthur E. Hertzler spoke on the significance of "The Most Recent Research in Cancer." Dr. Isadore A. Anderson is secretary of the society.

MONTANA

New Officers.—Deer Lodge County Medical Association: president, Dr. Owen C. Evans; secretary, Dr. Carroll R. Bancroft; both of Anaconda.——Missoula County Medical Society: president, Dr. Charles Pixley; secretary-treasurer, Dr. George F. Turman, both of Missoula.

State Tuberculosis Hospital.—The Montana State Sanatorium for Tuberculosis will be built this year, at a cost of $100,000. It will be probably located on the west bank of the Bitter Root River, about 2 miles from Stevensville, a location at an elevation of 4,000 feet. The buildings are to consist of an administration block, including office, treatment and officers' living rooms, superintendent's residence, employees' cottages, twenty-five sleeping shacks, etc.

Personal.—Dr. Charles E. K. Vidal, Great Falls, has been appointed a member of the State Board of Health, to fill the unexpired term of the late Dr. William Treacy.——Dr. Joseph Piedalue, Bozeman, has succeeded Dr. Albert D. Brewer as physician of Gallatin County.——Dr. Thomas J. McKenzie, Missoula, has succeeded Dr. Edwin C. Anderson as health officer of Missoula County.——Dr. Alexander D. McDonald, Kalispell, has been appointed health officer of Flathead County.

NEBRASKA

New Officers.—Jefferson County Medical Association, January 17: president, Dr. Thomas J. Andrews, Fairbury; secretary-treasurer, Dr. Harry E. Potter, Endicott.——Saunders County Medical Society, January 18: president, Dr. Mary A. Quincy, Ashland; secretary, Dr. Frank E. Way, Wahoo.——Dodge County Medical Association, January 22: president, Dr. Anders P. Overgaard; secretary-treasurer, Dr. Sylvester A. Preston, both of Fremont.

NEW MEXICO

New Officers.—Luna County Medical Society, at Deming: president, Dr. Edward A. Montenyohl, and secretary, Dr. I. B. Keller, both of Deming.——Bernalillo County Medical Society installed its new officers, January 3: Dr. Charles A. Frank, president, and Dr. Frank E. Tull, secretary, both of Albuquerque.

Personal.—Col. George E. Bushnell, M. C., U. S. Army, in command of the United States General Hospital for Tuberculosis, Fort Bayard, delivered an address before the Grant County Medical Society, January 27, on "Immunity."——Dr. Robert Smart, formerly of the Medical Corps of the Army, but more recently a practitioner of Albuquerque, has moved to San Diego, Cal.——Dr. Silas G. Sewell after three and a half years' successive administration of the Presbyterian Sanatorium, Albuquerque, has resigned and will devote himself to private practice.

NEW YORK

Vital Statistics for 1911.—Dr. Eugene H. Porter, State Commissioner of Health, has filed his annual report with Governor Dix which shows the lowest death-rate yet recorded in this state. There were 2,092 fewer deaths in 1911 than in 1910, and the urban rate was but little higher than the rural, the death-rate being 15.5 per 1,000 population as against 16.1 for 1910. The births exceeded the deaths by 75,288, the number of births registered being 220,825. There were 90,000 marriages or about 5,000 more than during the previous year. Owing to the epidemic of influenza during the winter of 1910-1911 the winter mortality exceeded that of the summer. Pulmonary tuberculosis caused 14,179 deaths, about the same number as during the previous year. For the entire period of the past twenty-five years consumption has caused 11 per cent. of the deaths in this state. Cancer caused 8,000 deaths during 1911, while in 1891 only 3,000 deaths were attributed to that disease. The death-rate from typhoid fever was the lowest ever recorded, 14 per 100,000 population. There were 1,000 more deaths from accidents and 42 fewer from suicide in 1911 than in 1910.

New York City

Harvey Society Lecture.—The next in the present course of Harvey Society lectures given at the New York Academy of Medicine, February 17, by Prof. R. H. Chittenden of Yale University is on "Current Views Regarding the Nutrition of Man."

Pneumonia Focus.—An epidemic of pneumonia, confined to five blocks of Villa Avenue in Upper New York, is attracting the attention of the health physicians. During the last few days more than eighty cases of pneumonia have been reported in this locality.

Violent Deaths of 1911.—The annual report of the New York board of coroners shows that 5,700 sudden deaths were reported to the coroner's office during the year. Of these, 2,650 were from violence; the homicides numbered 193 and the suicides 430. Of the deaths, ninety were caused by automobiles, seventy-two by surface cars, ten by subway trains and sixty-eight by elevators.

Milk Laboratories Incorporated.—The supreme court has approved the incorporation of the Nathan Straus Pasteurized Milk Laboratories, an association of which Nathan Straus is the head, and which has for its purpose the establishment of milk depots throughout the state and later throughout the world. Physicians are to be employed for the purpose of instructing mothers in the use of pasteurized milk.

Sells Library.—It is announced that Dr. Thomas Addis Emmet has sold his collection of extra illustrated books, most of which pertain to American history. Dr. Emmet is said to have illustrated more books concerning American history and to have used autographs, letters and rare documents more freely than any other collector. Dr. Emmet is 85 years old, and gives this as the reason for disposing of the collection.

Urge National Bureau of Health.—The creation of a national health bureau was the subject under discussion at the Republican Club on February 3. Officers of the health boards of New York, New Jersey, Pennsylvania and Rhode Island and Massachusetts were represented, either by letter or in person. Others who spoke in favor of the creation of the bureau were Drs. Irving Fisher of Yale, Joseph D. Bryant, Louis L. Seaman and William M. Polk, and Senator Robert Owen.

Civil Service Examination.—The municipal civil service commission has directed that an open competitive examination be held for the position of assistant registrar of records in the Department of Health. This position commands a salary of $3,000 a year, and requires that the incumbent be not only a duly qualified physician, but that he shall have had experience and training in statistical work. The time and place of the examination will be announced by the commission in due time.

Janeway Library for Columbia.—At the recent meeting of the Trustees of Columbia University it was announced that Dr. Theodore C. Janeway, Bard professor of the practice of medicine, had presented the trustees with the medical library of his father, Dr. Edward G. Janeway, to be the departmental library of the department of the practice of medicine. The library comprises about 1,500 bound volumes and 2,500 unbound monographs, journals and pamphlets.——It was also announced that Mrs. Russell Sage has given $25,000 to establish the E. G. Janeway library endowment fund at the medical school.

Hebrew Charities Report.—The annual report of the United Hebrew Charities shows that of $40,000 disbursed for relief purposes, 20 per cent., was on account of the ravages of tuberculosis among workers. This is an increase of $8,000 over the amount distributed for the relief of sufferers from tuberculosis, and this organization is of the opinion that this city is not making any headway in the fight against tuberculosis. For two years they have been conducting an experiment whereby they moved thirty-five families into sanitary apartments and bettered their living conditions, and the result has showed that some sufferers from tuberculosis can be cured even in their own homes.

New Building for Hospital.—Plans have been completed for a new building to be added to the Mount Sinai Hospital plant. This building will be the pathologic building for which Adolph Lewisohn gave $130,000 some time ago. The hospital corporation has just purchased two additional lots on the block opposite the Administration Building, where it already owned thirteen. This is to provide for the future needs of the hospital. The hospital has also received a gift of $20,000 for the extension of its social service work from Paul M. and Felix M. Warburg. This gift makes a total of $245,000 that the institution has received during the past year in the form of donations, legacies and bequests.

Health Department Insists on Money for Vaccination.—The Tammany aldermen again blocked the proposal to appropriate $10,000 for the purpose of offering free vaccination to people in the tenements. Dr. Lederle, however, says that he is undismayed, and will persist in making the request until he gets the money, and he now asks for $15,000. Thus far this year there have been nine cases of small-pox reported in Brooklyn, and the Board of Health is of the opinion that the time is ripe for an epidemic of small-pox unless vaccination is generally practiced. In the year 1902, when there was an outbreak of small-pox, and during the years following, the city appropriated $115,000 and made some 810,000 vaccinations. It is stated that in some portions of the city there has been practically no vaccination during the past ten years.

Personal.—Sir Frederick and Lady Treves arrived in New York from Panama, January 31, and sailed for England the next day.——Dr. and Mrs. L. Emmett Holt sailed for the Mediterranean, January 6.——Dr. Philip F. O'Hanlon, who was operated on for diverticulitis six weeks ago, has recovered and resumed practice.——Dr. Carl von Noorden, Vienna, will deliver a series of lectures on problems of metabolism in the New York Post-Graduate Medical School in October.——Dr. Abraham Sophian of the Rockefeller Institute of Medical Research left Texas, where he went to assist in combating the epidemic of spinal meningitis, on February 3. In appreciation of his services, the city of Dallas gave him $2,500 and Waco and a number of smaller towns presented him with $5,000, besides which he received a number of gifts in jewelry from local health departments and private individuals.

OHIO

Personal.—Dr. Edger L. Vermilya has been elected health officer of Fremont.——Dr. John E. Myers, Springfield, has declined to serve again for the board of hospital trustees.——Dr. Frank P. Stafford is critically ill at his home in New Carlisle.

New Officers.—Dayton Medical Society: president, Dr. J. F. Wuist, and secretary-treasurer, Dr. Francis T. Newcomer.——Darke County Medical Society, at Greenville, January 11: president, Dr. William C. Gutermuth, Versailles, and secretary-treasurer, Dr. John E. Hunter, Greenville.——Columbiana County Medical Society, at East Liverpool: president, Dr. Harry Bookwalter, Columbiana, and secretary, Dr. J. Howard Davis, East Liverpool.——Columbus General Practitioners' Medical Society, at Columbus: president, Dr. Albert S. Barnes, and secretary, Dr. John Rauschkolb.——Ashtabula County Medical Association, at Ashtabula: president, Dr. Lee C. Stiles, Austinburg, and secretary, Dr. Mary M. Battles, Ashtabula.——Tuscarawas County Medical Society, at Uhrichsville: president, Dr. Robert S. Barton, New Philadelphia, and secretary, Dr. George Tracy Haverfield, Uhrichsville (reelected).——Greene County Medical Society, at Xenia: president, Dr. Harry O. Whitaker, New Burlington, and secretary, Dr. Clarence G. McPherson, Xenia.——Lake County Medical Society, at Painesville: president, Dr. Henry E. York, Fairport Harbor, and secretary, Dr. Henry W. Grauel, both of Painesville.——Montgomery County Medical Society, at Dayton: president, Dr. Albert H. Lane, and secretary, Dr. Charles C. McLean, both of Dayton.——Trumbull County Medical Society, January 30: president, Dr. Charles W. Thomas; secretary-treasurer, Dr. Frederick K. Smith, both of Warren.

Cincinnati

New Officers.—The Medical Civic Association of Cincinnati organized January 31, and elected Dr. Charles A. L. Reed temporary chairman; president, Dr. Robert W. Stewart; secretary, Dr. Frank B. Cross.——Cincinnati Academy of Medicine, January 8: president, Dr. William D. Porter; secretary, Dr. Charles T. Souther.

Personal.—Dr. William H. Peters has been appointed assistant health officer of Cincinnati, vice Dr. William H. Striet-mann, resigned.——Dr. Otto P. Geier has been appointed superintendent of the newly created department of Charities and Corrections and announced the following aids: Dr. Charles E. Howard, physician to the City Infirmary; Dr. Frances M. Hollingshead, physician and assistant surgeon to the House of Refuge; Dr. Herbert A. Brown, physician to the workhouse, and Dr. James W. Miller, physician to the municipal lodging-house. The following consulting staff, without pay, has been appointed: Dr. Wade McMillan, orthopedist, Dr. Edmund Baehr, neurologist, and Prof. B. B. Breeze.——Dr. Charles Jones has been appointed receiving physician to the Cincinnati Hospital, vice Dr. Charles E. Howard, resigned.——Dr. Clyde E. Shinkle has been appointed assistant physician to the Longview Asylum, vice Dr. Emerson A. North, resigned.——Dr. Julius H. Eichberg has been appointed physician to

the infectious and contagious service of the Cincinnati Hospital.——Dr. Charles A. Stammel, Jr., has been appointed resident physician to the Industrial School for Boys, Lancaster.——Dr. William Ravine has been appointed chief medical inspector of schools; Dr. George L. Kriedler, district medical inspector for Madisonville; Dr. John H. Walton, district physician for Sayler Park, Delhi and Fernbank; Dr. Harry W. Behymer, district physician for Mount Washington, and Dr. George Weinrich, food inspector.——Dr. George L. Hall has been appointed assistant chief sanitary inspector.——Dr. David I. Wolfstein has been appointed a member of the staff of the Cincinnati Hospital, vice Dr. Frank W. Langdon, resigned. Dr. Horace J. Whitacre has resigned as professor of surgical pathology and principles of surgery in the Ohio-Miami Medical College.

PENNSYLVANIA

Philadelphia

Work of Free Dispensary.—During 1911, the one hundred and twenty-sixth year of the existence of the Philadelphia Dispensary for the Medical Relief of the Poor, more than 100,000 prescriptions were compounded and more than 40,000 patients were treated.

Appeal for Lincoln Memorial Hospital.—The treasurer of Mercy Hospital is making an appeal to Philadelphia to support the Mercy Hospital Memorial to Abraham Lincoln. The hospital, which is for the use of the colored people of the southern section of Philadelphia, is doing good work and deserves generous support.

Examination of School Children.—Forty-five physicians have been appointed members of the medical inspection corps for the schools of Philadelphia, after a competitive examination. Dr. Walter S. Cornell has been elected director of the corps, which has for its object not only the inspection of public school children, but also instruction in child hygiene.

Additions to Hospitals.—The new addition to the Polyclinic Hospital at Eighteenth and Lombard streets was formally opened February 5, when a reception to the corporators, trustees and medical staff and faculty was given by the president, Herbert L. Clark. Started in 1907, the dispensary represents an outlay of $75,000. It is a three-story brick and stone structure, with special provisions for the various medical specialties, having large space in the basement for the orthopedic department and spacious rooms on the other floors for throat, nose, ear, eye, skin and other diseases. Nearly double the former number of patients can now be handled for treatment.——Hospital of the Woman's Medical College, at Twenty-Second Street and College Avenue, is to have three stories added.

School Inspectors Named.—On February 5, Dr. Joseph S. Neff, Director of Public Health and Charities, appointed fifty-six physicians as school inspectors. The list comprises thirty-three names of physicians who were recently appointed provisionally and twenty-three new names to take the place of those who failed to pass the examination. As a result of an examination conducted along civil service lines, 40 per cent. of the provisional appointees failed. All the questions given were practical and such as would be a fair test of the working knowledge of sanitation required of a medical examiner.

Board of Education Makes Appointments.—At a meeting of the elementary schools committee of the board of education, February 7, fifteen additional school nurses were appointed at a salary of $600 a year, to be increased $30 a year until the maximum of $750 is reached.——Dr. Joseph S. Neff applied for more medical inspectors, for clerical assistance and for an appropriation for supplies to get the medical staff organized. The request was granted and it was decided to set aside $200 for supplies and to appoint five additional inspectors at $1,500 a year to supervise the others, each to be responsible for two school districts.

Personal.—Dr. Tom Jays, a medical missionary from equatorial Africa, and one of the secretaries of the Church Missionary Society, has been visiting in Philadelphia as a representative of the Student Volunteer Movement for Foreign Missions.——Dr. Edward F. Walsh, who has been very ill with pneumonia for two weeks, is recovering.——Dr. S. Weir Mitchell celebrated his eighty-third birthday February 15.——Dr. John B. Deaver was the guest of honor at the dinner given by the John B. Deaver Surgical Society of the University of Pennsylvania February 9.——Drs. Edward A. Spitzka, George B. Miller and Frank C. Abbott were badly overcome by ammonia fumes, pouring from a break in the refrigerating plant in the Daniel Baugh Institute of Anatomy of Jefferson Medical College, February 8.

WASHINGTON

New Officers.—Cowlitz County Medical Society, at Woodland, January 10: president, Dr. Clement W. Bales, Kelso. ——Chehalis County Medical Association, at Aberdeen, January 17: president, Dr. Clayton E. Bartlett, and secretary-treasurer, Dr. Leon L. Goodnow, both of Aberdeen.——Pierce County Medical Society, at Tacoma, January 2: president, Dr. Wilmot D. Read, and secretary, Dr. Edward D. Sutton, both of Tacoma.——Spokane County Medical Society, at Spokane, January 11: president, Dr. Wilbur W. Mackenzie, and secretary, Charles M. Doland, both of Spokane. It was voted to reduce the dues of the society from $10 to $5.——Yakima County Medical Society, at North Yakima: president, Dr. Edmund S. West, and secretary, Dr. Frank E. Chase, both of North Yakima.

WEST VIRGINIA

New Officers.—Kanawha County Medical Society; president, Dr. Harry H. Young, and secretary, Dr. Patrick L. Gordon, both of Charleston.

Betterment of Hospital.—A number of physicians of the city met at North Wheeling Hospital January 11, to discuss plans for its betterment and enlargement. Dr. Charles A. Wingerter was elected permanent chairman of the organization and Dr. Otis D. McCoy, secretary. It was decided that a staff of twelve physicians and twelve surgeons, including specialists, be appointed, which in addition to its hospital work should give instructions to nurses. It is proposed also that a new wing should be built on the south side of the main building. A committee of seven was appointed to confer with the management regarding these matters. The committee consists of Drs. John A. Campbell, Charles M. Frisell, Gregory Ackerman, S. Edward Bippus, Andrew J. Noome, William S. Fulton and Edward L. Armbrecht.

WISCONSIN

School for Stammerers Opened.—Dr. George P. Barth, chief medical inspector of the Milwaukee schools, announced the opening of the fourth public school class for stammerers in the Twentieth District School.

State Board Meeting.—At the meeting of the State Board of Health, January 31, Dr. William F. Whyte, Watertown, was reelected president of the board, and the appointment of a committee of five graduate nurses to examine applicants for certificates as licensed nurses under the state law was confirmed.

Hospital Staff Reorganization.—The medical staff of St. Mary's Hospital, Milwaukee, was reorganized, January 30. Dr. James A. Bach was elected president; Dr. Arthur T. Holbrook, vice-president, and Dr. Hans A. Reinhard, secretary. It was decided to establish a free out-patient department of the hospital.

State Society Meeting.—The annual meeting of the Wisconsin State Medical Society will be held in Wausau, May 22-24. The proposed entertainments include a reception to the visiting ladies at the Wausau Club, an automobile ride around the city, a smoker for the men and a banquet at Rothschild Park.

Examinations to Be in English.—The Wisconsin Board of Medical Examiners recently adopted a resolution that hereafter all examinations are to be in the English language. The board believes that physicians who have been graduated from foreign medical schools should have been in this country sufficiently long to know the language and to become versed in American laws before becoming eligible to practice in the United States.

Annual Report of Hospital.—The annual report of the Emergency Hospital, Milwaukee, shows that 2,878 patients were treated, with a mortality of seventy-two during the year just closed and that forty-one persons were brought dead to the institution. Dr. Gustave A. Hipke has been elected president of the trustees of the hospital and Dr. Rudolph F. Teschan, secretary; Dr. Curtis A. Evans, president of the hospital staff and Dr. Daniel Hopkinson, secretary.

Personal.—Dr. Daniel R. Freeman, Colby, who has been seriously ill at the Marshfield Hospital, is reported to be convalescent.——Dr. Frank R. Wasielewski has been appointed a member of the board of trustees of Emergency Hospital, Milwaukee.——Dr. Susan Jones, Racine, who was operated on recently in Milwaukee, is reported to be recovering.——Dr. Harry A. Keenan, Edgerton, has been appointed district surgeon for the St. Paul System, between Madison and Janesville.

New Officers.—The Alumni Association of the Wisconsin College of Physicians and Surgeons, at Milwaukee, January 31: president, Dr. Reno Weiss; secretary-treasurer, Dr. E. C. Wetzel, both of Milwaukee.——Milwaukee Society for Sanitary and Moral Education, January 31: president, Prof. Charles McKenney; secretary, Dr. Timothy L. Harrington.——Brown County Medical Society: president, Dr. Thomas Oliver; secretary-treasurer, Dr. Isaac E. Levitas, both of Green Bay.——Jefferson County Medical Society, January 22: president, Dr. L. J. Bennett, Fort Atkinson; secretary, Dr. Carl R. Feld, Watertown.

Against Tuberculosis.—The new Douglas County Tuberculosis Sanatorium, the first to be erected in the state under the law passed by the last legislature providing state aid, is completed and has been accepted by the county board. The sanatorium has accommodation for about thirty patients and has been completed at a cost of $30,000.——At the annual meeting of the Menominee Antituberculosis Association, January 10, Dr. F. E. Butler was elected vice-president, and the treasurer reported a balance of $753.08.——Janesville Branch of the Wisconsin Antituberculosis Association was organized January 10 and Dr. Samuel B. Buckmaster was elected vice-president, and Drs. Wayne A. Munn and Michael A. Cunningham members of the executive committee.——Marinette Antituberculosis Association was organized by Drs. Theodore J. Redelings, George Frederick R. Colter and others.

GENERAL

New Officers.—Fox River Valley Medical Society, February 1: president, Dr. Benjamin T. Phillips, Menominee, Mich.; secretary-treasurer, Dr. William Webber Kelley, Green Bay, Wis.

Personal.—Dr. Samuel T. Darling, chief of laboratory of the Ancon (C. Z.) Hospital, has been elected an honorary fellow of the Society of Tropical Medicine and Hygiene of London, and a corresponding foreign member of the Société Pathologique Exotique of France.

Bequests and Donations.—The following bequests and donations to hospitals have recently been announced:

Mount Sinai Hospital, New York City, $100,000, by Mrs. Mayer Lehman, to extend the work of the hospital along the lines of preventive medicine.

Massachusetts Charitable Eye and Ear Infirmary, $2,000, by the late Catherine M. Lamson, Dedham.

New York Lying-in Hospital, $5,000, the receipts of a costume ball recently given at Sherry's.

Mount Sinai Hospital, $1,000, and Lebanon Hospital, New York City, $500, by the late Moritz H. Rosenstein.

German Hospital, Hospital of the University of Pennsylvania and Jefferson Medical Hospital, each $50,000 in trust, the income to be used for the endowment and maintenance of beds, by the late Anna H. Carver, Philadelphia.

Hitchcock Memorial Hospital, Hanover, N. H., $20,000, by the late Mrs. Emily Hitchcock.

House of Mercy Hospital, Pittsfield, Mass., $50,000, by the late Mrs. Florence de Wolfe Sampson.

United Charities of Chicago, $100,000; Visiting Nurses' Association of Chicago, $25,000, and Lake Geneva Fresh-Air Home, $10,000, by the late Richard T. Crane.

Julia F. Burnham Hospital, Champaign, Ill., $1,000, by Mr. and Mrs. Ervin Dyer, Chicago.

Bushwick and East Brooklyn Dispensaries, the income of $20,000; Brooklyn Home for Consumptives, German Hospital and Brooklyn Hospital, $5,000 each, by the late Henry Batterman, Brooklyn.

For the establishment of a hospital for women in Pittsburgh, the greater part of an estate valued at about $2,000,000, by the late Thomas N. Miller.

Woman's Medical College of Pennsylvania, $10,000, by the late Anne B. Hensley, Wynewood, Pa.

Pennsylvania Hospital and Hospital of the Protestant Episcopal Church, each $20,000; Philadelphia Orthopedic Hospital, $500; Philadelphia Children's Hospital, $1,000, and Pennsylvania Epileptic Hospital and Colony Farm, Oakburne, Pa., $1,000, by the late Mary W. Paul.

Charity Hospital and the Eye, Ear and Nose Hospital, New Orleans, each $100,000; New Orleans Convalescent Home, $10,000, by the late Isaac Delgado.

Bethea Public Hospital, Dixon, Ill., $80,000 real estate and $2,100 cash, by the late Hon. S. H. Bethea.

Ohio Hospital for Women and Children, Cincinnati, $25,000, by the late Mrs. F. A. Sackett.

FOREIGN

Tuberculosis Literature Circle.—A number of physicians in Sweden, Norway, Finland and Denmark, interested in the literature on tuberculosis, have combined and when any one of the 173 enrolled publishes anywhere an article bearing on tuberculosis in any way he sends 173 copies of the reprint of his article to the secretary of the society who forwards one to each member. The secretary is Dr. C. E. Waller, Halahult, Sweden.

The Approaching International Congress of Dermatology and Syphilology.—The date for this congress was postponed from last September to April 8 to 13, 1912; everything is in readiness for a representative gathering that week, to be held in the historic Castel S. Angelo, at Rome, under the presidency of Professor T. de Amicis of Naples. The secretary general is Dr. G. Ciarrocchi, 5 Piazza Grazioli, Rome. The treasurer is Dr. L. Silvestri, 13 Via della Pace, Rome; the membership fee is five dollars, and reduced rates on the Italian railroads are offered to members. Besides the main topic, the treatment of syphilis, the subjects announced for discussion are the results of physical measures in skin diseases, and a general discussion of blastomycosis, sporotrichosis and allied affections. The date is the week before that of the international tuberculosis congress, also at Rome, and April 1 and 2 the second Italian conference on the sexual question (Convegno nazionale per la questione sessuale) is to be held at Milan. The last international congress of dermatology convened at New York in 1907.

The International Sanitary Conference.—The great progress realized in preventive medicine in the last few years is most instructively shown in the sanitary conference which has just been holding its modest sessions in Paris without any limelight publicity. The first conference was held in Paris in 1851, with delegates from eighteen states, the last at Paris in 1903 with representatives of twenty-four states, while the present one, also at Paris, has 102 delegates, representing forty-two states. How the world would have hooted, fifty years ago, at the idea of a solemn international conclave to discuss the rat and the mosquito, and yet that is practically the gist of the proceedings of the present conference. The deliberations are not yet concluded as an intermission of a few weeks was taken for further study of the conclusions before their final adoption. Instead of imposing new burdens on travelers and traffic, some of the old ones are being thrown aside, thus relieving international commerce. The president of the International Office of Public Health naturally has taken a leading part in the proceedings. This comparatively new institution was described in THE JOURNAL, Feb. 27, 1909, page 708.

LONDON LETTER

(From Our Regular Correspondent)

LONDON, Feb. 3, 1912.

The National Insurance Act

The profound dissatisfaction of the profession with the national insurance act has culminated in what may be regarded as a declaration of war. At a meeting of the comitia of the Royal College of Physicians an invitation was received from the national insurance commissioners to appoint two members to attend a conference. The point which the commissioners specially desired to discuss related to the selection of the medical members of the advisory committee, by whom the commissioners must be advised in the framing of regulations. The commissioners also expressed a wish to hear the views of those present on other matters or procedure which the representatives of the medical bodies may desire to bring forward in bringing the act into operation. The comitia resolved to decline the invitation but stated that the college would be happy to assist in any steps that might be taken for amending the act for the improvement of public health, provided that the interests of the medical profession are safeguarded. The council of the British Medical Association has declined a similar invitation, intimating that the members of the council must defer deciding whether they would meet the commissioners until they received instructions from the forthcoming meeting of representatives of the association. The Royal College of Surgeons of Edinburgh has also declined the invitation and there is little doubt that the other medical corporations which have been approached will take the same course.

Death of Sir Henry Trentham Butlin

Sir Henry Trentham Butlin, Bart, D.C.L., LL.D., F.R.C.S., consulting surgeon to St. Bartholomew's Hospital, past President of the British Medical Association and of the Royal College of Surgeons, died at his residence in London on January 24, after a long illness, aged 67. Never robust, he had been in failing health for some years and recently was obliged in consequence to resign the presidency of the Royal College of Surgeons before the expiration of his term of office. Notwithstanding his frail constitution, he was one of the hardest workers in the profession. The son of a Cornish clergyman, he received his medical education at Bartholomew's Hospital, where he passed his whole career. In 1871 he was appointed medical registrar and in the following year surgical registrar. Microscopic pathology was then in its infancy and he studied it assiduously, attaining great skill in the making of sections of morbid tissues, from which he made careful drawings. He soon became recognized as an authority on pathology. In

1880 he was appointed Erasmus Wilson lecturer on pathology at the Royal College of Surgeons. His lectures were published in book form under the title "Sarcoma and Carcinoma, Their Pathology, Diagnosis and Treatment." In surgery he devoted special attention to malignant disease and to affections of the throat and tongue. He embodied his experience in several well-known works—"Diseases of the Tongue" (which was published in 1885), "Malignant Disease of the Larynx," "The Operative Surgery of Malignant Disease" (1900). He practiced speaking and debating with great care, and was soon recognized as one of the most accomplished speakers in the profession. His addresses were generally given with the aid of a few notes, but were so polished and perfect in form that it seemed as if they had been previously written and then memorized. He was also an accomplished linguist, reading and speaking with fluency French, German and Italian. He was thus able to play an important part in international medical congresses. As a teacher he excelled, adopting the Socratic method, to the delight of both himself and his pupils. In 1905 he delivered the Bradshaw lecture on cancer at the Royal College of Surgeons. He maintained that "carcinoma is a parasitic disease, not in the limited sense in which the term appears to have been used of late as synonymous with infection, but in the larger and wider sense, in which it used to be, and always should be employed, to express the fact of one organism living at the expense of another organism, each pursuing its otherwise separate and independent existence." In two recent lectures on "Unicellula Caneri, the Parasite of Cancer," delivered before the Royal College of Surgeons last November, he expanded this idea and insisted that the cancer cell is an independent organism, like a protozoon; that it lives a life wholly independent and proper to itself; and that it derives nourishment from its host while doing nothing to repay the latter. He concluded that the cancer cell is a veritable parasite formed from the tissues of its host. Regarding it as an independent parasitic animal, he named it *Unicellula cancri* and was inclined to place it among the protozoa.

In private life he was most courteous and delighted in dispensing hospitality. In the politics of the profession he took a great interest, and in spite of his strenuous work as surgeon did great service. He was treasurer of the British Medical Association from 1891 to 1895. When elected he modestly said that there were men more fitted for the post than he but none who had the interests of the association more at heart. When in 1909 he was elected president, at the time when he was president of the Royal College of Surgeons, it was unanimously felt that, on account of his distinguished position in the profession and zeal for the association, no man so much deserved the honor.

A Murderer Secures His Death Sentence by Insisting on His Sanity

The question of the sanity of a prisoner at the time he committed a murder is often a difficult one and the plea of insanity gives rise to much conflicting medical evidence. But the spectacle of a prisoner repudiating evidence that he is insane and thus securing his death sentence seems to be unique. At Norwich, a printer's reader, aged 29, insisted on pleading guilty to murdering his infant son and attempting to kill himself on the same day. He declined the assistance of counsel offered by the judge, and when the prison doctor gave evidence that he was not in a fit state to plead, the prisoner insisted on cross-examining the doctor to demonstrate his sanity. The physician said that the prisoner was suffering from obsessions, believed that he was morally tainted, and therefore thought it right to kill his son as he believed the taint would be transmitted to him. Having asked the physician what qualifications he had as a brain specialist, the prisoner said: "I am of sound mind; I realize the gravity of this charge; I have offended against the law, and am here to satisfy the law." The judge said: "The insane person believes he is sane, a sane person would try to get off on the ground that he was insane. It is no use pursuing this." The jury decided that the prisoner was fit to stand his trial and the judge said that he could not do otherwise than act on their view. He had only to accept the prisoner's plea and pass on him sentence of death. It was satisfactory to know, however, that the home secretary would direct an inquiry into the prisoner's mind notwithstanding the conclusion the jury had come to.

The Treatment of Leprosy

A government report was issued recently containing a further report by Dr. E. P. Minett, assistant government bacteriologist, on the nastin and benzoyl chlorid treatment for leprosy at the Mahaica Leper Asylum, British Guiana. Dr. Minett's conclusions are that nastin has apparently very little beneficial effect on leprosy. A solution of benzoyl in oil shows a slightly higher percentage of improvement than nastin. Anesthetic cases of leprosy run a definite course, after which the disease seems to die out, leaving the patient no longer infective. These patients recover sensation after a time in areas previously anesthetic, and after self-amputation only scars remain. This is a natural process and takes place without any treatment. It is not, apparently, influenced by either nastin or benzoyl chlorid. Nodular cases do not tend to improve naturally, except in very rare instances; nor do they appear to be affected appreciably by the nastin or benzoyl chlorid. The so-called destruction of bacilli is a natural process, varying considerably, and does not appear to be influenced by nastin or benzoyl chlorid. Variation in the amount of destruction of bacilli observed is of limited value as an indication of the effect of treatment. Benzoyl chlorid in petroleum oil is extremely valuable as a nasal spray or a paint for ulcerating surfaces. It quickly renders the discharge free from bacilli. Its regular use for this purpose is strongly recommended in leper asylums.

Laryngeal Anthrax

An inquest has been held at Bradford on a young woman who died from an unusual form of anthrax. She had been engaged in manipulating different varieties of wool, mostly of the gray and brown Persian kind, which, however, had gone through several processes before it had reached the combing-room, in which she worked. Exactly how the infection occurred is not known, for her sister, who had had anthrax, stated that nothing objectionable had been noticed in the wool which they had been handling. At a necropsy, made by Mr. F. W. Eurich, bacteriologist to the Anthrax Investigation Board, anthrax was found in the larynx, from which general infection of the system had taken place. In his experience a lesion in the larynx is unique and does not appear to have been observed previously. The lungs were not affected. The jury recommended that alpaca, which is not scheduled as a dangerous wool, be sorted for the purpose of eliminating blood-stained pieces. The finding of a suitable disinfectant for infected wool which will destroy all spores, leaving the fabric unimpaired, is still a problem.

Increased Consumption of Tea

With the decline in the consumption of alcoholic beverages in recent years there has been a corresponding increase in the consumption of tea, coffee, cocoa and other nonintoxicants. A great increase has taken place in the popularity of tea. During the past year 276 million pounds of tea were consumed while in the United States the amount was only 111 millions and in Russia 136 millions, although the population of these countries is more than double that of the United Kingdom. In 1895 the amount of tea drunk per head of the population was 5.65 pounds; now it is 6.3 pounds. Contrast this with the decreased consumption of beer. In 1900 the number of gallons of beer drank per head was 30.8; in 1909 only 25.9.

Death From a Wasp Sting and Workmen's Compensation

A claim for compensation by a widow is a new illustration of the difficulty as to what constitutes an accident "arising out of and in the course of" a workman's employment. The husband of the applicant was engaged as a waiter at an entertainment following a wedding in a country district. Wasps were attracted by the remains of champagne and food. When the deceased had stopped work and was eating his lunch in a tent, he suddenly exclaimed, "I am done" and removed a dead wasp from his tongue. He had been stung and died an hour later. The necropsy showed that he suffered from valvular disease of the heart. The coroner's jury brought in a verdict of "heart failure caused by shock consequent on the sting of a wasp on the tongue—accidental death." The judge held that death was due to the accident of the sting and that the fact that the man's condition predisposed him to succumb to such an accident was immaterial, and that the medical view, that death was due to heart disease, put forward in the case could not prevail. He was also satisfied that the accident occurred in the course of the employment of the deceased. This left the question whether the accident arose out of that employment. He had to ask himself whether the accident resulted from a risk reasonably incidental to the employment. He found that the deceased by reason of the work that he had to perform in the tent was exposed to an extraordinary and peculiar danger of being stung by wasps, and that his death was the result of a risk reasonable and peculiarly incidental to his employment.

PARIS LETTER

(From Our Regular Correspondent)

PARIS, Jan. 26, 1912.

Possibility of Keeping Alive the Transparent Cornea of the Enucleated Human Eye

Dr. P. Magitot of Paris recently reported before the Académie des Sciences an interesting attempt at transplantation of the human cornea. A glaucomatous eye required to be removed because of the intolerable pain that it caused. Immediately after the enucleation the eye was washed in Locke's solution, then immediately immersed with all aseptic precautions in a jar containing blood-serum from another individual. The container was put in a refrigerator. After some hours the interior pressure of the eyeball fell and the cornea became transparent. The eye was thus preserved in excellent condition for eight days. Then a rectangular piece one-half the thickness of this cornea was carefully excised and implanted in a cavity of the same dimensions made on the cornea of another patient. This patient had received some years before quicklime in the face and in the right eye. The cornea consequently became entirely opaque. The tissue-graft was put in place without sutures and formed a little window about 4 by 5 millimeters. At the end of forty-eight hours the transplanted tissue adhered perfectly and was entirely transparent.

At present, seven months later, the foreign tissue still keeps its transparency and gives the patient a visual acuity of one-tenth normal.

Overtures for the Reopening of the Medical School

M. Guist'hau, minister of public instruction, has received delegations from the first- and second-year students and from the under-graduate societies requesting an early reopening of the Faculté de médecine. He promised to recommend leniency to the council of ministers provided the students would give him a written guarantee of the preservation of order, but he declared that he would listen to no more requests which are accompanied by complaints.

Insane Foreigners in France

At one of the last sessions of the Société internationale pour l'étude des questions d'assistance, Dr. Marie read an interesting paper on insane foreigners in France, of whom there are many in the asylums of the department of the Seine. The native countries of some of these patients will not pay their expenses; and several countries even refuse to receive back patients of their own nationality and thus insane foreigners are a heavy charge on the budget. In Paris alone there is an average of 300 foreigners in the asylums for the insane.

Efforts Against Infant Mortality

In the suburbs of Lille, in the little industrial town of Wasquehal, remarkable efforts are being made to check infant mortality. In most of the weaving and spinning mills of this place, the women employees who have infants at the breast have for their use a special room, well aired and heated, with cribs for babies. Every two hours during the first months of the infant's life, the mother comes to give it the breast. The rest of the time a woman looks after the infants. The working women may thus continue their work without danger for their babies while suckling their infants regularly. In connection with the room just mentioned there is an obstetric consultation, an infants' consultation and a maternity.

A Curious Claim for Damages Against a Physician

An army physician diagnosed the presence of pulmonary tuberculosis in a young soldier who was invalided home on the physician's recommendation. The young man's father, a rich provincial manufacturer, expressed much gratitude to the physician for the care his son had received in hospital, and asked the physician's advice with regard to the treatment which ought to be followed to obtain a complete cure. The physician advised life in the open air, with rest and frequent feeding, etc. The father decided to place his son in a villa in the country surrounded by every comfort. A year afterward the physician received a letter from the minister of war announcing that the manufacturer demanded $1,000 damages. He declared that his son was completely cured and that the cure proved the diagnosis to be erroneous; he therefore held the physician responsible for the useless expense which the alleged erroneous diagnosis had occasioned. Fortunately, the physician had no trouble in proving that he was not in error and the demand for damages failed.

Treatment of Purulent Tuberculous Pleurisy by Simple Repeated Punctures

On January 9, Dr. A. B. Marfan, *agrégé* professor at the Faculté de médecine de Paris and physician of the hospitals, reported before the Académie de médecine a case of a boy of 13 who had a continuous fever accompanied by signs of pleuropulmonary congestion of the left base. Finally, the fever still persisting, a pleural effusion appeared, the liquid being of a serofibrinous character and rich in polynuclears, but without bacteria visible under the microscope or capable of culture in strong media. The polynucleosis was much lower at the second puncture, and it was seen that the effusion was becoming purulent. At the third puncture pus was evacuated and inoculation of a guinea-pig showed that it was a case of purulent tuberculous pleurisy. Marfan refused to treat the patient by pleurotomy because in three similar cases he had observed in this operation a fistula which refused to heal and incurable secondary infections. He therefore employed simple puncture repeated every time the pus accumulated in considerable quantity. He considered the puncture a mere palliative treatment; he thought that the pus would continue to reproduce itself and that a time would come when a complication would carry off the patient. The pleural cavity, however, contracted little by little and the twentieth puncture, made about eighteen months after the onset of the disease, brought away no pus. This favorable result appeared to depend on various factors; in the first place the probable integrity of the subjacent lung, the youth of the subject, the recent date of the infection and the general treatment rigorously followed out. But the principal thing seemed to be the early employment of puncture and its repetition at sufficient intervals, emptying the pleura without delay and renewing the evacuations often enough. The lung thus did not undergo the atrophic sclerosis which crowds it permanently into the costovertebral groove and does not permit it to dilate sufficiently to fill the pleural cavity. In this case the first punctures were from fifteen days to three weeks apart, the last from five to six weeks. Altogether there were nineteen punctures in eighteen months.

BERLIN LETTER

(From Our Regular Correspondent)

BERLIN, January 26, 1912.

Personal

Both Professor Hess of Würzburg and Professor Axenfeld of Freiburg have declined the appointment for the chair of ophthalmology to succeed von Michel. Naturally these refusals attract serious attention, and the question is raised as to the reason for this surprising circumstance which is somewhat humiliating for Berlin. In the political press the claim is made that the department of education is putting difficulties in the way of the professors nominated by the faculty with the purpose of forcing them to refuse, intending then to select the candidate who has been kept in view as a favorite, namely, Professor Greeff, a pupil of Schweigger. The fact is that Greeff was in marked favor with the deceased Althoff, and especially was appointed to the directorship of the newly established eye clinic in the Charité, which is regarded as competing with the regular eye clinic of the university. According to my information, however, the suspicion mentioned is scarcely tenable but rather it seems to be a fact that the arrangement and equipment of the university eye clinic suffered materially in the last few years under the direction of Michel who was sick for a long time, and that on this account extensive changes are necessary which will require years. Until that time the new professor must work under unsatisfactory conditions and must in addition to this superintend the reconstruction of the clinic. These difficulties, together with the recent disinclination, which is becoming continually more marked, on the part of professors to remove from agreeable situations in the smaller universities to the nerve-racking metropolis, are the essential reasons why three prominent ophthalmologists, one after the other, have declined the call to Berlin. We are for various reasons anxious to learn how this, for us unsatisfactory, play of question and answer will finally end.

Professor Umber, a former pupil of Professor Kraus, and hitherto the director of the internal department of the municipal hospital at Altona, has been elected as successor of the deceased Professor E. Grawitz as director of the internal department of the municipal hospital at Charlottenburg. Professor von Bergmann, the son of the noted surgeon and hitherto assistant at the medical clinic of Professor Kraus in Berlin, has been called as the successor of Umber.

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Assumption of the Organized First-Aid Service by the City Administration

Some time ago I wrote of the poorly coordinated condition of the Berlin *Rettungswesen*, the first-aid service, and mentioned that the medical profession was seeking to improve the organization and especially to have the municipal authorities take charge of the service. There are three establishments charged with this work: 1. The *Sanitätswachen*, the sanitary watch, which has been in existence for a number of years, having been founded and supported by citizens and which was originally opened only during the night, and for a part of the time was not supervised by a physician, but later, at least in certain districts of the city, has also given first-aid service in the daytime. 2. The *Unfallstationen*, the accident stations, which were organized by the trades' unions (*Berufsgenossenschaften*) to care for accidents to laborers insured by them, and which without doubt have rendered good service. But as these institutions gradually attracted the entire material of fresh injuries, and thus robbed the hospitals and even the university clinics of material, a very marked opposition made itself felt among the rest of the Berlin medical profession. Particularly under the leadership of the deceased von Bergmann, the medical profession organized a medical first-aid society which secured the establishment, at the municipal hospitals and clinics, of stations for first aid and gradually made a considerable reduction in the activity of the accident stations.

Naturally there arose more or less conflict as a result of three different organizations working in one field. To remove this difficulty it seems necessary to unite the three organizations by merging them in a department under the control of the city. This aim has not been easy to accomplish, on account of the variety of opposing interests. Now the *Magistrat*, the city government, after much deliberation, has finally determined to take the initiative. It has determined to establish a first-aid service to begin April 1 for which the city is to appropriate $50,000 (200,000 marks) for a period of one year. The establishment is planned on the basis of securing for each station a limited number of salaried physicians who will supervise the work in turn for a definite period amounting to four or five hours per day and eight hours at night. In view of the division of the service and to secure a person responsible to the municipal authorities, one of the physicians for each station is to act as chief. The sum of $375 (1,500 marks) is suggested as the salary for each physician. The chief is to receive in addition an especial compensation of about $125 (500 marks). The management of the entire first-aid service is to be vested in a board of nine members, to consist of two members of the city *Magistrat*, four aldermen and three representative citizens. The board, provided the city council agrees to the plan, shall be immediately appointed and begin its work of determining the fundamental arrangements in detail and other necessary measures. Whether the plan in this form will receive the consent of the city council remains to be determined. There will be no lack of objections from various sources. The board of the accident stations requires, as we understand, that at every station there shall be a regular salaried medical director who shall assume the responsibility. The salary of the chief is regarded as too small. All of the physicians who have been for a long time in office at the accident stations must be taken over by the city. If the program of the accident stations includes the hope that the physicians of the accident stations shall secure a dominant position in the new municipal organization, the Aerzteverein der Berliner Rettungsgesellschaft (medical association of the Berlin first-aid society) may register a protest against it. The board of directors of the Aerzteverein requires on its part that all those who have hitherto been employed in the first-aid service shall be received into the new organization, but this would be impossible if the arrangement contemplated by the city government, for a four or five hour alternating service is adopted, for it is evident that no physician even half way occupied can possibly spare five hours from his practice regularly every two or three days. This would result in securing for the first-aid service only very young and inexperienced physicians, who would desert the service as soon as other and better positions offered. After all it may be some time before the plan for municipalizing the first-aid service will be carried into effect.

Annual Meeting of the German Surgical Society

The congress of the German surgical society for this year meets April 10 to 13 and will assemble no longer in its own hall in Langenbeck House but in a concert hall in Köthenerstrasse. This change in the place of meeting is occasioned by the fact that the Langenbeckhaus in the last few years has become insufficient to accommodate the increasing number of participants. At the last session the overcrowding was so great that the management has found itself compelled to adopt this expedient. As I have already mentioned, the Berlin medical society in conjunction with the German surgical society intends to build a Virchow house (Virchowhaus), in which a hall shall be provided of sufficient size for the meetings. But it is necessary for the accomplishment of this plan that the German surgical society shall first sell the Langenbeckhaus which belongs to it. The government is expected to be the buyer as it needs the land on which this building stands for the necessary enlargement of the neighboring university surgical clinic. The negotiations in the matter were begun a long time ago and it is to be hoped will be conducted to a satisfactory conclusion.

Official Report on the Antityphoid Campaign

The present imperial and Prussian authorities are engaged in the task of preparing a volume on the comprehensive campaign against typhoid undertaken of late years with the resources of the empire, which shall give an account of all the measures adopted since 1903 and their results. As at the beginning of the century typhoid was prevalent to an alarming extent in Germany, particularly in the western portion, the imperial government recognized the necessity in common with those federal states which were interested and with the imperial provinces, of undertaking a uniformly directed campaign against the disease. According to a plan matured under the direction of Robert Koch, the eradication of the plague was organized. In 1903 $37,500 (150,000 marks) and in later years $50,000 (200,000 marks) were appropriated for the work. This sum was devoted chiefly to the establishment of typhoid stations which were located according to need, in places where a typhoid focus had been ascertained. The management of each station was entrusted to three physicians. In the imperial health council (*Reichsgesundheitsrat*) a typhoid subcommittee was formed to establish central headquarters for thorough discussion of measures to be taken against the disease and their enforcement. The campaign was first inaugurated in the Prussian district of Trier, the Bavarian district Pfalz, the principality of Birkenfeld and the lower Rhine provinces, but it was soon evident that the disease was more extensively distributed than was originally assumed to be the case. The results reached since then in the area above outlined are to be published in the "Arbeiten aus dem kaiserlichen Gesundheitsamt." The report is to be presented to the new Reichstag soon after it assembles.

Training of Nurses for Infants

January 18 a conference of experts was held in the state interior department to discuss uniform principles for the training of nurses for infants. Many prominent pediatricians from the whole of Germany took part in the discussions. The introductory report was made by Professor Langstein, the director of the Augusta Victoria institution for infant welfare. He emphasized the fact that the recent progress in the care of infants necessitated quite different requirements from the nurses than were formerly in vogue, and as a result demanded a different and more thorough training. He insisted on the following requirements: 1. To care for sick infants, the nurses should be trained by a two years' course of instruction, with examination and a diploma. 2. A one year course of instruction, without examination, might also be established from motives of economy. 3. Nurses for healthy children should receive instruction for one year with examination and diploma. 4. Attendants on infants should receive a half year's course. From the discussions it may be concluded that in essentials there is unanimity with regard to the necessity for training nurses and attendants to care for infants, but that from social reasons and on account of the diferences, for instance, between conditions in the north and south of Germany, certain differences of opinion exist. In order to secure the most extensive uniformity, a committee was appointed for further discussion.

VIENNA LETTER

(From Our Regular Correspondent)

VIENNA, Jan. 28, 1912.

Public Care of Crippled Children

In a paper read before a medical and lay audience, Dr. Aberle, the assistant of Professor Lorenz, described the charitable institutions available at present in this country for the care of crippled children. There are, altogether, no more than four "homes" for these unfortunate individuals. One is located near Vienna, the Elizabeth Asylum, which accommodates sixty-five children between the ages of 3 and 14,

the stay there being free of charge to the patients. The operations, however, are not done there but in the clinic of Professor Lorenz, where the children remain until they can be discharged from the ward. The other three institutions receive only such children as can be treated there, and they can accommodate 360 children. Thus only 425 beds are available for the numerous patients, and if to this number are added the beds in the homes for convalescent in our coast towns, not more than 600 beds can be counted on. This is entirely insufficient, for the majority of cripples require a regular hospital care in bed, with physical treatment (massage, electricity, hot air baths, etc.). Dr. Aberle therefore suggested that public attention be turned to these conditions and that funds be collected for the erection, in each of the Austrian countries, of central institutions for cripples where they should receive not only medical care suited to the individual cases, but also instruction in manual work in order to enable them to earn their living. As a rule the underlying cause of crippling is tuberculous disease, nerve affection or rachitis, in the order mentioned, and if the case is taken in time, the maiming and disfigurement may be averted, as well as the function of the affected part retained.

Strike of Veterinary Students at the Vienna University

The veterinary school of Vienna is officially a branch of the Vienna university; in reality it is a military institute. The graduates of this school are absorbed nearly entirely by the army, and only after six to ten years of military service do they take up private practice. The conditions of teaching are quite medieval, in spite of the excellent teaching staff. The veterinary hospital and out-patient department are quite unsatisfactory as regards outfit and financial standing. The students have to comply with military requirements quite out of date, and the general prospects of a graduate of this school are poor, as he cannot reach a higher position in the army than that equivalent to a captain, and that not before twenty-five years' service. The majority only reach the rank of lieutenant. Repeated petitions by the students have hitherto failed to bring about any improvement of the old grievances. Therefore the veterinary students, who flock to this place from the whole empire, as there is but one school for them, have resolved to boycott the veterinary service in the army and to take up private practice or other appointments at once on graduation from school. This decision is very important; there is always need for a veterinary surgeon in the country districts, and there is no possibility for coercion by the army authorities if the students prefer not to enter the army. Therefore this step will most likely bring about an improvement of the existing conditions.

Poisoning in a Hospital for Insane

In Czernowitz is located one of our largest hospitals for the mentally afflicted, and there occurred a short time ago an outbreak of a mysterious disease. The chief symptoms were gastro-intestinal troubles, fever and prostration. There was a rapid succession of cases, as in Berlin, where the inmates of night shelters were poisoned by methyl alcohol. Not only the patients but also several of the nurses and male attendants, as well as some of the physicians, were affected. At first it was thought that an epidemic of influenza, with gastro-intestinal symptoms predominating, was to be dealt with. Soon, however, a suspicion of metallic poisoning seemed justified, but diligent search for the source of the poison proved absolutely negative. Meanwhile 750 persons were on the sick-list, with nine deaths within four days. The etiology is still unknown; and the cases have gradually decreased in number and severity. Investigation is directed also toward the possibility of foul play, for at present nothing could be found in the hospital itself to explain the incident.

Special Instruction for Military Surgeons

It is interesting to note, from a political standpoint, that the military authorities lay much stress on commanding numerous officers of the army military corps to surgical clinics and hospitals all over the country. They are to learn, chiefly, the treatment of accident cases as well as general surgery. Rumors are rife that war is not impossible, therefore the army doctors must be prepared.

Sick Child Deprived of Medical Aid—Fake Healer Imprisoned

The mental affliction and narrowness of mind resulting in all kinds of humbug is no privilege of the lower classes of the New World, as has been clearly shown in the course of a charge of manslaughter heard recently in the lower court of Vienna. An old woman was charged with having neglected her grandchild by calling in a "prayer-healer," instead of a doctor, when the child showed symptoms of a "bad cold." Both the grandmother and the "prayer-healer" were uneducated persons. The child was given an amulet consisting of some powdered spider-substance wetted in the child's urine to wear on the chest; besides, the child was "prayed on" by the woman, and the cold was not, otherwise interfered with. It was proved that in spite of the advice of other friends of the patient, no doctor was admitted. The child died from acute pneumonia and the necropsy ended with the immediate imprisonment of the "prayer-healer." In the course of the hearing the judge remarked that such a state of mind was inexcusable and punishable, as "prayer-healing" was nonsense and any sensible person could understand that to keep away a doctor from a diseased person could mean only death to the patient. Therefore the "prayer-healer" was sent to prison for six years.

Conflict Between a Medical Organization and the First-Aid Society

For about three years the medical profession in Austria has had an organization for upholding its interests, called the Wirtschaftliche Organisation. It has become the regular custom of medical men to negotiate all contracts through this medium, and within the short time of its existence this organization has succeeded in bringing about substantial improvement of the position of physicians in public and private appointments. The Vienna First-Aid Society (Rettungsgesellschaft), mentioned in a previous letter (THE JOURNAL, Dec. 23, 1911, p. 2096), naturally has a number of doctors on its staff. As the terms of appointment and service with the first-aid corps were rather inexact and could be interpreted in several ways, the Wirtschaftliche Organisation undertook, about a year ago, the task of bringing about an understanding between the profession and the Rettungsgesellschaft. The latter body is a private organization supported by voluntary contributions; its financial position is good and it is an esteemed and honored body governed by a non-medical board. The organization drew up, at the request of the staff of the First-Aid Society, a regulation which fixed the time of service for each physician, stipulated a certain pay on a sliding scale, provided for old-age pensions, and also for a representative and executive member on the advisory board—in short, codified the rights and duties of the physicians. The board, however, refused to have the medical organization interfere with its internal management. A campaign in the press was opened from both sides, and the unpleasant fact of quarreling between medical organizations—for the First-Aid Society must be regarded as such—was thus made known to the public. The sympathy of the population is with the medical profession. The only medical man of the managing board of the First Aid, Professor Weichselbaum, resigned his position of honor, and now the question is whether or not a boycott by medical men will be instituted. Nevertheless, all the friends of the Rettungsgesellschaft and of the profession hope to find a way for arranging in an amicable manner the serious differences of opinion.

Marriages

ARTHUR WELLESLEY CARSON, M.D., Ishpeming, Mich., to Miss Winifred H. Johnson of Chicago, at Marquette, January 24.

JOSEPH ENLOE THOMAS, M.D., Tirzah, S. C., to Miss Margaret B. Proudfoot of Goderich, Ont., at Baltimore, February 2.

RUDOLPH BURNEY WATSON, M.D., Ancon, C. Z., to Miss Rachel V. Hicks of Roslyn, L. I., N. Y., at Panama, January 15.

SAMUEL W. HOLLOWAY, M.D., to Miss Martha S. Whittingham, both of Louisville, at Jeffersonville, Ind., January 25.

RAYMOND BARBER, M.D., to Miss Gertrude Gardener Maltby, both of Rawlins, Wyo., in New York City, January 27.

EDGAR DEMPSEY ALLEN, M.D., Crooksville, O., to Miss Catherine F. McGonagle of New Lexington, O., January 30.

MELVIN S. HENDERSON, M.D., Rochester, Minn., to Miss Mabel Christianson of Marshfield, Wis., February 10.

JOHN U. DAY, M.D., Jacksonville, Ill., to Mrs. Bertha Bailey of Ashland, Ill., at Tallula, Ill., January 31.

DAVID LISLE CONWAY, M.D., Syracuse, to MABEL COBB, M.D., of Santa Clara, N. Y., January 30.

DAVID COHEN, M.D., Jeffersonville, Ind., to Miss Tillie Strull of Louisville, January 31.

CHARLES M. HEBERTON, M.D., Denver, to Mrs. E. B. Criddle, at Kansas City, recently.

V. 5
1912

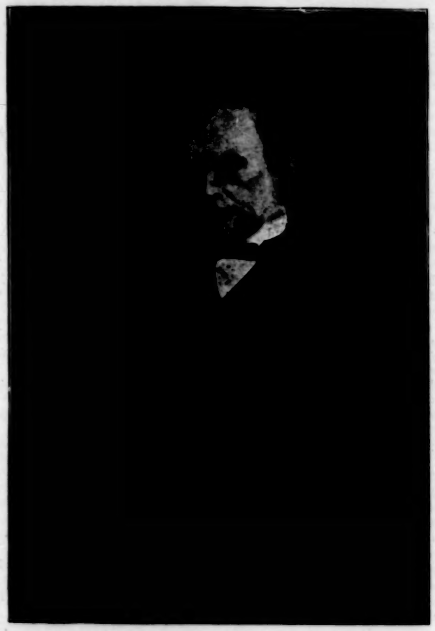
Deaths

Joseph, Baron Lister, pioneer in antiseptic surgery; died at his home in London, England, February 11, aged 84.

He was born in Upton, Essex, April 5, 1827, the son of Joseph Jackson Lister, a London merchant, who occupied his leisure with study and work on the microscope. He received his early education at the Friends' School, Tottenham, near London, and later studied at University College. He graduated from the University of London in 1847 with the degree of B.A. During the next five years he studied medicine under the medical faculty of University College and in the University College Hospital. His earliest researches were in the fields of histology and physiology.

On leaving University College Hospital in 1854, heeding the advice of Sharpey to "take six weeks of Syme's clinic," Lister went to Edinburgh and, instead of six weeks, remained six years, as acting resident surgeon to Syme in the Royal Infirmary, and assistant surgeon in the same institution. He here began his career as a teacher, holding the position of extramural lecturer on surgery. During all this time Lister indefatigably pursued his researches in histology and surgical pathology. While in Edinburgh, Lister was married to Agnes, the daughter of his preceptor.

He was made professor of surgery in the University of Glasgow in 1860 and surgeon to the Glasgow Royal Infirmary. His investigations on coagulation of the blood were given to the medical world in the Croonian lecture of 1863, which enunciated the idea that foreign substances hasten the action of coagulation. The advent of Pasteur's work on fermentation immediately associated itself in Lister's mind with the observation of Carlisle, in 1864, regarding phenol (carbolic acid), and in 1865 he made his first application of this theory. His first address on antiseptic surgery was given before the British Medical Association at its Dublin meeting in 1867; in this he stated his belief that the essential cause of suppuration in wounds was decomposition, and that the decomposition in the injured parts might be avoided, without excluding the air, by applying as a dressing some material capable of destroying floating particles. He did did not claim priority in the use of phenol, but on the theory of antiseptics.



LISTER, 1827-1912.

In the natural process of evolution, asepsis later succeeded antisepsis and regarding this matter Championnière, the father of asepsis, stated that "aseptic surgery is as much an issue of the discovery of Lister as is true antiseptic surgery."

In 1869, Lister was made professor of clinical surgery in the University of Edinburgh, the chair made vacant by the retirement of his father-in-law from active work, and here he continued his investigations into the bacteriologic and chemical worth of various antiseptics. In 1877, Lister left Edinburgh to become professor in clinical surgery in King's College, London, and here remained as professor until 1893, and as emeritus professor during the remainder of his life.

He was created a baronet in 1883, was made first Baron Lister in 1897; was surgeon extraordinary to the late Queen Victoria and serjeant-surgeon in ordinary to King Edward VII. He was president of the Royal Society from 1895 to 1900 and of the British Association for the Advancement of Science in 1896. He received the honorary degree of M.D. from the universities of Dublin, Würzburg, Bologna, Budapest and Geneva; that of LL.D. from Edinburgh, Glasgow and Cambridge; that of D.C.L. from Oxford, and in addition had conferred on him the Grand Cross of the Order of Dannebrog by the King of Denmark; the Prussian Order of Merit and was made a member of the Privy Council. He was also a member, or an honorary member of medical and scientific societies the world over.

The accompanying picture is from a photograph copyrighted by Elliott and Fry, London.

Hiram Van Sweringen, M.D. Jefferson Medical College, 1876; a member of the Indiana State Medical Association; a member of the medical staff of St. Joseph's, Polk and Lutheran hospitals, Fort Wayne, Ind.; a veteran of the Civil War; a member of the American Pharmaceutical Association and author of an excellent pharmaceutical lexicon; professor of materia medica and therapeutics in the Medical College of Fort Wayne from 1878 until the college ceased to exist; died at the home of his son in Fort Wayne, February 1, from disease of the lungs, aged 67.

David C. Jones, M.D. Memphis (Tenn.) Medical College, 1873; for sixty-six years a practitioner of Texas; for four years assistant surgeon U. S. Army; assistant surgeon of the Fourth Texas Infantry and later brigade surgeon, C. S. Army, during the Civil War; died at his home in Cameron, January 27, from senile debility, aged 79.

Peter H. Latham, M.D. University of Maryland, Baltimore, 1876; for one term coroner of Carbon County, Pa., and for many years visiting physician at the Laurytown Almshouse; local surgeon for the Lehigh Valley Railroad at Weatherly, Pa.; died at his home in that city, January 23, from diabetes, aged 62.

Nelson Gilman Smith, M.D. Eclectic Medical Institute, Cincinnati, 1869; a veteran of the Civil War; for fifteen years a member of the faculty of the Eclectic Medical College of Indianapolis; died at his home in Seymour, Ind., January 20, from cerebral hemorrhage, aged 63.

George Washington Fitzpatrick, M.D. Medical College of Ohio, Cincinnati, 1863; a veteran of the Civil War, who was injured in a street car accident four years ago, died at his home in Kansas City, Mo., February 1, from acute nephritis, aged 76.

Alexander Addison McCrimmon, M.D. McGill University, Montreal, P. Q., 1891; for three years after graduation surgeon on transatlantic steamers; for two years mayor of Rainy River, Ont., for three years coroner of the Rainy River District, and for several years division surgeon for the Canadian Northern Railway; died at his home, January 24, from pneumonia, aged 43.

Warren E. Anderson, M.D. University of Alabama, Mobile, 1882; a member of the American Medical Association and president of the Escambia County (Fla.) Medical Society in 1893; vice-president of the Pensacola board of commissioners and ex-officio mayor of the city from 1893 to 1895; local agent of the State Board of Health; one of the most prominent practitioners of Florida; died at his home in Pensacola, February 1, aged 54.

Thomas P. Oven, M.D. University of Michigan, Ann Arbor, 1876; New York University, New York City, 1877; a member of the American Medical Association; local surgeon for the Burlington system at Brookfield, Mo., for twenty-five years; died at his home in that city, January 25, from pneumonia, aged 63.

Darius Norsleet Barrett, M.D. Memphis Hospital Medical College, 1901; formerly a member of the American Medical Association; formerly surgeon for the Pere Marquette and Michigan Central railways at St. Joseph, Mich.; later professor of nervous and mental diseases in Chattanooga Medical College and a member of the ophthalmologic staff of the Erlanger Hospital; for about five years a specialist on diseases of the eye, ear, nose and throat of Detroit; died in the Augustana Hospital, Chicago, January 27, three days after a cholecystectomy and appendicectomy, aged 42.

Norton Royce Hotchkiss, M.D. University of Maryland, Baltimore, 1891; a member of the American Medical Association and the Association of Military Surgeons of the United States; president of the New Haven Medical Association and formerly surgeon general of the state; attending surgeon to St. Raphael's Hospital and one of the directors of Elm City Hospital, New Haven; medical director of the Mutual Indemnity and Protective Association; died at his home in New Haven, January 30, from leukemia, aged 41.

John J. Williamson, M.D. Tulane University, New Orleans, 1876; for many years a practitioner, an alderman and a member of the school board of Cleburne, Tex.; died at the home of his daughter in San Angelo, January 23, from erysipelas, aged 73. At a called meeting of the Johnson County Medical Society, January 24, a committee was appointed to draft resolutions regarding the death of Dr. Williamson.

George H. Haddy, M.D. Louisville (Ky) Medical College, 1882; a member of the American Medical Association; local surgeon of the Minneapolis, St. Paul and Sault Ste. Marie Railway and formerly local surgeon of the Wisconsin Central Railway; died at his home in Park Falls, Wis., January 27, from cerebral hemorrhage, aged 53.

Olof Page, M.D. University of Pennsylvania, Philadelphia, 1867; afterward in the governmental sanitary service of Venezuela and later a resident of Chili, where he served as surgeon-general in 1891; a pioneer in the development and progress in that country; died recently at his home in Valparaiso.

Edward F. Fornias, M.D. Hahnemann Medical College, Philadelphia, 1880; a native of Cuba and for a time representative of the Republic of Uruguay, and acting vice-consul for Spain in Philadelphia; died at the home of his daughter in Philadelphia, January 22, from heart disease, aged 69.

Adelia E. Sanderson (license, Minnesota, Exemption Certificate, 1883); for nearly half a century a practitioner of Douglas County, Minn., and for eight years chairman of the board of health of Osakis; died at her home in that village, January 17, from cerebral hemorrhage, aged 82.

Oscar August Czarnowski, M.D. Tulane University, New Orleans, 1873; a member of the American Medical Association; a Confederate veteran; notable as a philanthropist and eminent as a physician of New Orleans; died at his home in that city, January 24, from pneumonia, aged 75.

Horace M. Moody, M.D. Geneva (N. Y.) Medical College, 1866; assistant surgeon of the One Hundred and Eighty-Third Pennsylvania Volunteer Infantry during the Civil War; a practitioner of East Smithfield, Pa., for fifty years; died at his home, January 18, aged 73.

Frank L. Sutton, M.D. College of Physicians and Surgeons (Homeopathic), Buffalo, N. Y., 1882; for many years a practitioner of Canisteo, N. Y.; for two terms coroner of Steuben County; died in Port Allegany, Pa., January 7, from organic disease of the heart, aged 57.

Louis W. Morris, M.D. University of Maryland, Baltimore, 1885; a member of the American Medical Association and a member of the staff of the Peninsula General Hospital, Salisbury, Md.; died at his home in that city, February 2, from pneumonia, aged 48.

Clifford Adams Stiles, M.D. Savannah (Ga.) Medical College, 1857; surgeon during the Confederate service throughout the Civil War and afterward a practitioner of North Georgia and Florida; died at his home in Seville, Fla., January 22, aged 76.

H. Karl Schemel, M.D. University of Kiel, Germany, 1882; died at his home in Hoskins, Neb., January 30, from the effects of phenol self-administered, it is believed, with suicidal intent, while despondent on account of ill health, aged 56.

Edwin Robinson Maxson, M.D. Jefferson Medical College, 1845; a member of the Medical Society of the State of New York, and the oldest practitioner of Syracuse; died at his home in that city, January 25, from senile debility, aged 91.

Fred Strong Tabor, M.D. Rush Medical College, 1881; of Spring Valley, Ill.; died recently and was buried February 1, aged 53.

Christian F. Schiele, M.D. Cincinnati College of Medicine and Surgery, 1902; a member of the Ohio State Medical Association; formerly German principal in one of the Cincinnati public schools; died at his home, January 23, aged 38.

Robert McIntyre Sproule, M.D. Tulane University, New Orleans, 1892; of Wallisville, Tex.; formerly presiding elder of the Beaumont District, M. E. Church, South; died at the Norsworthy Hospital, Houston, Tex., January 26, aged 60.

William A. Cross, M.D. Miami Medical College, Cincinnati, 1872; a fellow of the College of Physicians of Philadelphia, and a member of the medical staff of the Jewish Hospital; died at his home in Jenkintown, Pa., January 29, aged 72.

Alfred B. Whayne, M.D. Kentucky School of Medicine, Louisville, 1870; surgeon of the Eighth Missouri Volunteer Infantry throughout the Civil War; died suddenly at his home in Fulton, Ky., Dec. 24, 1911, from heart disease, aged 71.

John F. Genolin, M.D. University of Nashville, Tenn., 1879; a member of the Indiana State Medical Association; died in his office in Bloomington, January 25, it is believed, from the effects of an overdose of chloral and morphin, aged 57.

John Baynton Abercrombie, M.D. Long Island College Hospital, Brooklyn, 1875; a Confederate veteran; formerly a practitioner of Natchez, Miss.; died at his home in St. Petersburg, Fla., January 22, from senile debility, aged 71.

Andrew J. Bradley, M.D. Baylor University, Dallas Tex., 1905; a member of the Oklahoma State Medical Association; died at his home in Albany, January 25, from the effects of phenol accidentally self-administered, aged 37.

Reuben Webb Hill, M.D. Bellevue Hospital Medical College, New York City, 1877; a veteran of the Civil War and a pioneer practitioner of Santa Barbara County, Cal.; died at his home in Carpinteria, January 26, aged 65.

Carl H. Hitzrot, M.D. Western Pennsylvania Medical College, Pittsburgh, 1889; formerly of McKeesport, but later a practitioner of Pittsburgh; died suddenly in that city, January 21, from organic heart disease, aged 56.

Samuel Short, M.D. Long Island College Hospital, Brooklyn, N. Y., 1903; of Harlem, New York City; died in Bellevue Hospital, January 25, from septicemia due to a rusty nail wound received five months before, aged 39.

Joseph E. Wenman, M.D. Eclectic Medical Institute, Cincinnati, 1885; formerly a Baptist missionary in the West Indies; died at his home in New Philadelphia, O., January 22, from heart disease, aged 69.

S. Darwin Smith, M.D. Chicago Homeopathic Medical College, 1896; a member of the Illinois State Medical Society; died at his home in Rushville, Ill., January 20, from heart disease, aged 41.

Floyd G. Donehoo, M.D. Southern Medical College, Atlanta, 1881; for thirty years a practitioner of Blount County, Ala.; died at his home in Oneonta, January 24, from cerebral hemorrhage, aged 57.

Peter F. Thornburgh (license, years of practice, Illinois, 1877); formerly a clergyman of the Methodist Episcopal Church; died at his home in Martinsville, January 23, from senile debility, aged 86.

James Samuel Hickey, M.D. Hahnemann Medical College, Philadelphia, 1892; instructor of anatomy in his alma mater; died at his home in Philadelphia, January 25, from myocarditis, aged 56.

James S. Smith, M.D. University of Buffalo, N. Y., 1862; a member of the Medical Society of the State of New York; died at his home in Buffalo, January 30, from senile debility, aged 79.

Walter W. Johnson, M.D. New York Homeopathic Medical College, New York City, 1887; of Rochester, N. Y.; died in a sanatorium in that city, January 26, from acute nephritis, aged 52.

Charles P. Bradford, M.D. Detroit (Mich.) College of Medicine, 1893; of Chicago; died in Michael Reese Hospital in that city, January 20, from carcinoma of the pancreas, aged 42.

John S. Gowan, M.D. University of Southern California, Los Angeles, 1903; a member of the Medical Society of the State of California; died at his home in Fullerton, January 25.

Edwin E. Richardson (license, Kansas, 1901); for thirty-eight years an eclectic practitioner of the state; died at his home in Hutchinson, January 31, from angina pectoris, aged 73.

William Edward Evans, M.D. University of Virginia, Charlottesville, 1868; Bellevue Hospital Medical College, 1869; died at his home in Boonville, Mo., January 23, aged 65.

Arthur Allen Perry, M.D. Barnes Medical College, St. Louis, 1900; died at his home in Rankin, Okla., January 19, aged 40.

Willey J. P. Kingsley, M.D. New York Medical College, New York City, 1855; mayor of Rome, N. Y., for two terms; died at his home, January 26, from senile debility, aged 87.

Michael James O'Toole, M.D. Baltimore (Md.) Medical College, 1902; a member of the Massachusetts Medical Society; died at his home in Clinton, Dec. 2, 1911, aged 35.

Maxey Smith (license, South Carolina, 1897); a practitioner of Pages Mills, S. C., since 1893; died at his home, January 15, from tuberculosis, aged 42.

John H. Jackson, M.D. Cleveland University of Medicine and Surgery, 1874; died at his home in Peoria, Ill., January 12, from cerebral hemorrhage, aged 62.

Monroe Earl Blackman, M.D. Long Island College Hospital, Brooklyn, 1894; died at his home in Brooklyn, January 20, from heart disease, aged 62.

Dellis Horatio McMasters, M.D. University of Louisville, Ky., 1889; died at his home in Pryorsburg, Ky., January 28, from heart disease, aged 47.

Samuel McCartney Bleakney, M.D. University of Buffalo, N. Y., 1866; died at his home in Worthville, Pa., February 2, from pneumonia, aged 76.

Alice R. Held, M.D. Chicago College of Medicine and Surgery, 1907; of Chicago; died in that city, Dec. 7, 1911, from lobar pneumonia, aged 40.

Peter Demott Rowland, M.D. Harvey Medical College, Chicago, 1904; died in Daly City, San Mateo County, Cal., January 15, from myocarditis.

Francis Edward Archibald, M.D. Hahnemann Medical College, Philadelphia, 1896; died at his home in Philadelphia, January 6, aged 41.

John Harvey Love, M.D. Memphis (Tenn.) Hospital Medical College, 1881; died at his home in Kosciusko, Miss., January 27, aged 60.

Charles G. Snyder, M.D. Memphis (Tenn.) Hospital Medical College, 1894; died at his home in Clinton, Miss., January 27, aged 49.

James B. Cain, M.D. College of Physicians and Surgeons, Keokuk, Ia., 1876; died at his home in Omaha, Neb., January 24, aged 72.

John P. McCullough, M.D. Hahnemann Medical College, Chicago, 1891; died at his home in Paris, Ill., January 22, aged 43.

Miscellany

Errors in Diagnosis.—A. Guérin has an interesting study of this subject in the *Jour. de Méd. de Bordeaux*, 1911, lxi, 835. He has compiled from his own and others' experience a number of errors in diagnosis, some of which might have been avoided if the possibility of syphilis had been constantly borne in mind under all circumstances. He emphasizes that a syndrome suggesting tuberculosis may be a mask for syphilis or actinomycosis. Even under the microscope a syphilitic lesion may simulate tuberculosis or fibrosarcoma. He warns not to assume too hastily the presence of purulent pleurisy when pus is found in a child's thorax; it may come from a retropharyngeal abscess or abscesses from congestion or a dilated bronchus or a tuberculous cavity,—he cites instances of each, and emphasizes the harm done by the assumption of purulent pleurisy in these cases. In other cases serious results may be entailed by the assumption of tuberculosis when the trouble is really from slight dilatation of the bronchi. He warns further against immobilizing a hip joint when the coxalgia is merely a manifestation of hysteria; it is not so many years, he remarks since a woman's leg was removed above the hip joint just for this cause. He adds, that Broca's recent article on this subject (summarized in THE JOURNAL, Oct. 7, 1911, p. 1246) should be reread when a puzzling case of hip disease is encountered. Guérin emphasizes further the necessity for testing the pupil reflex and knee-jerk in examining every patient. Superficial pain above the umbilicus may be a sign of a deep lesion of the pancreas. He insists that when a child cries and complains, careful search for an invaginated loop in the bowel should be made, not omitting to palpate through the rectum. Ulceration in the mouth may be a sign of antipyrin in the stomach. In conclusion he warns that during cold weather artificial heat and carbon monoxid poisoning should always be borne in mind, no matter what symptoms may be presented. This latter warning recalls a recent description of the "rolling stoves" of the Paris flats. The stove is mounted on castors, and the short stove-pipe is fitted to an opening in the chimney. When it is desired to heat another room, the stove is pulled away from the chimney, a cover is placed over the open stove-pipe, and a plate fitted into the hole in the chimney, and the stove is merrily trundled out into the other room and backed up to a similar hole in the chimney here. The rolling stove may gather no moss, but it may dispense carbon monoxid, so that Guérin's warning is more needed in France than in this country.

Pharmaceutical Manufacturers, and the Council on Pharmacy and Chemistry.—We are in entire sympathy with the stand taken by some of the largest and most responsible pharmaceutical houses when they emphatically state that they are not only willing but anxious for the Council on Pharmacy and Chemistry to place the stamp of approval or disapproval on all products manufactured. The house that refuses to have its products passed on by the Council is not worthy of the patronage of the medical profession, for it can be definitely stated without fear of contradiction that the houses which object to the work of the Council on Pharmacy and Chemistry are not playing fair. On the other hand, there is absolutely no reason why members of the medical profession should patronize such houses, for as a rule they do not represent integrity and fair dealing. Furthermore, there is absolutely no excuse for the prescribing of any pharmaceutical preparations or biologic products that have not been approved by the Council, for the work of the Council is purely in the interest of honesty in manufacture and honesty in the representation of the products turned out. No reputable firm need have any fear of the Council, for if the representations concerning any product or products are correct, the Council will be sure to give its approval. Of course there may be errors of omission and when so discovered by the Council the firms to whom such omission can be attributed are advised by the Council with the express purpose in view of giving opportunity of making correction. It is only when the corrections are not made and the error is persistently perpetuated that the Council refuses to give its approval and exposes the misrepresentation.—*Jour. Indiana State Med. Assn.*

Microkinematography.—*Nature* gives a summary of the application of the moving picture principle to the illustration of biologic and medical subjects. The range of the kinematograph, it says, has been extended to the representation of objects as seen through very high powers of the microscope. The difficulty of illumination has been met by using the dark-ground method which makes it possible to take on a properly sensitized film photograph of exceedingly short exposure. While the resulting picture shows very little of internal structure, it is surprising, *Nature* says, how much does appear. The nucleus of a cell, for example, is frequently quite distinct and some structures, such as the kineto-nucleus of a trypanosome, can be sometimes seen perfectly clearly and followed as the organisms move about. M. Comandon has made a number of kinematographs of unstained living objects in this way showing the blood in actual circulation in the tail of a tadpole and of the blood in relapsing fever and in some forms of trypanosome sickness. In these latter the parasite is seen distinctly swarming in enormous numbers in a drop of blood. One of the greatest technical triumphs in this line is the films which show the *Spirochæta pallida*, which is difficult to demonstrate even with the use of stains. In the Comandon pictures it appears alive and moving with all its coils clear and sharp. Other uses of the kinematograph besides the representation of these living microscopic organisms are also mentioned in the article in *Nature*. It enables us to see in a few minutes operations, like the growth of tissues for example, which may take hours or days in reality, and conversely, it enables us also to view the progress of alterations which take place in nature otherwise too rapidly for us to observe. The kinematograph may well become a most efficient aid in the teaching of many biologic and especially medical subjects.

The Propaganda for Reform

IN THIS DEPARTMENT APPEAR REPORTS OF THE COUNCIL ON PHARMACY AND CHEMISTRY AND OF THE ASSOCIATION LABORATORY, TOGETHER WITH OTHER MATTER TENDING TO AID INTELLIGENT PRESCRIBING AND TO OPPOSE MEDICAL FRAUD ON THE PUBLIC AND ON THE PROFESSION

EDWARD J. WOODS

A Fraudulent "Cure" for Alcoholism

Edward J. Woods, 534 Sixth Avenue, New York City, advertises extensively, on both sides of the Atlantic, to cure alcoholism. Sometimes he uses his own name; sometimes he uses the name, Dr. Mary E. Webb, Boston, Mass. Woods, being nothing if not versatile, also sells a cure for bald heads, as well as a preparation to take the "kinks" out of the hair of those members of the colored race who are dissatisfied with the head covering that Nature provided. His trade name in this latter line of endeavor is the "Koskott Laboratory," and is located at 1269 Broadway, New York City. Associated with Woods, both in his cure for drunkenness and his hair-growing establishment, was one William E. Scott.

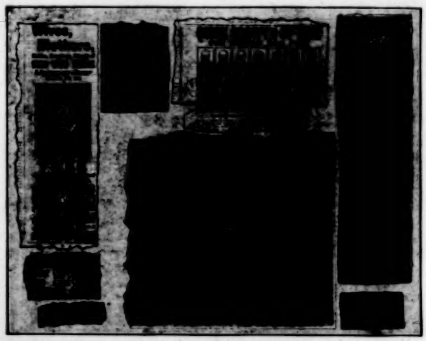


Fig. 1.—Here are a few of the advertisements by which Edward J. Woods obtains victims. Woods sells not only cures for baldness, cures for drunkenness, cures for the tobacco habit and cures for "kinky" hair in negroes, but he also dispenses a line of cures for rheumatism, catarrh, asthma, "nervousness" and sleeplessness, to say nothing of a cure for blushing, "complexion wafers", "wrinkle removers" and pile remedies.

We cannot do better than quote from the "Cautionary List" issued by London *Truth* regarding this individual:

> "SCOTT, WILLIAM.—A Yankee, whose real name is Skinner. He achieved distinction a few years ago in connection with a swindle named Symond's London Stores, on the smashing of which enterprise he proceeded to Berlin and, as Professor Dana, advertised a cure for asthma, as Professor Pollok, a cure for gout, as Horatio Carter, a cure for debility named 'Amvita,' and a number of other specialties. He was arrested in Berlin on a charge of fraud but decamped, forfeiting bail to the amount of £5,000. His present address is 1269 Broadway, New York, whence he is advertising a new hair-growing treatment under the style of 'Koskott.'"

DR. WEBB—STOOL-PIGEON

Should you read Dr. Mary E. Webb's advertisement, you will learn that she appeals particularly to "wives, mothers, sisters, daughters, friends of men who drink liquor or beer." She has, so run her advertisements, a "42 days' free treatment, of Kotalko" which may be "taken in tablets or dissolved in tea, coffee, milk, etc." You are asked to enclose the inevitable ten cents "to pay part cost of advertising and postage." You write for a free treatment. A letter comes back in skilful imitation of handwriting with certain parts so filled-in as to lead the uninitiated to suppose that it is a personal communication. You are told that Dr. Webb is "interested in your manly letter."

A LETTER IS WRITTEN

The "manly letter" referred to, in at least one instance, was written by a young woman connected with THE JOURNAL office and read as follows:

> "Please send me full particulars about your drink cure."

This was the entire letter and was written, in an evidently feminine hand, but Mary E. Webb, M.D., having, apparently, only one style of letter, replied:

> "In view of what you write about your own case and the fact that you show such strong character in your handwriting as well as your statements, and particularly as you have been drinking for so many years, I am not sending you my Kotalko Tablets because you expect a complete cure and my tablets would not accomplish same in your case. I am, therefore, returning your 10 cents in stamps. [Ten cents was not sent, in this instance, so Dr. Webb adds the postscript: "You failed to send stamps, so I am not enclosing any."] Mr. C.——— and I have written about your case, giving my favorable and professional report to Mr. Edward J. Woods, 534 Sixth Avenue, New York City. His is the one and only cure for your case and it will accomplish the result in 72 hours by the clock.
>
> "You will feel like a different man entirely. You will be astounded at the benefit. It is the same treatment as has cured many noted men, including ex-President Grover Cleveland and others of brains and ability. Your letter reveals you to be a man who will do wonderful work when entirely cured of the accursed disease."

And so on, *ad nauseam*. Sure enough, by the next mail came a letter from Edward J. Woods in imitation typewriting, explaining how perfectly simple it was to cure alcohol addiction with "Woods' Remedies." "My price is $10." Accompanying the letter was a booklet entitled "Confessions of a Former Alcohol Slave," in which Woods describes how he became a drunkard and how he was cured by a "learned doctor." Then it was that Woods conceived the idea of "curing" others as he had been "cured." Hence the mail-order business.

ANALYSES—OF COURSE!

It is hardly necessary to say that Woods can produce not only analyses, but also testimonials. Why not? There never yet was a medical fraud but could produce testimonials by the basketful; and anyone with $5 to spare can buy the sort of analyses that Woods uses. "Dr." A. B. Griffiths, a cockney who calls himself an "analytical and consulting chemist," certifies to the wonderful power of Woods' "specific treatment of alcoholism." Again, we remind our readers that Griffiths' analyses cost one guinea ($5) and that represents their total value. It is worth mentioning, incidentally, that when Woods placed his order for an analysis of his cure for drunkenness he also seems to have called for a similar analysis of his Koskott cure for bald heads. Probably Griffiths offers reductions for analyses when ordered in quantities.

Willard H. Morse, M.D., of Westfield, New Jersey, another "consulting chemist," goes A. B. Griffiths one better and not only praises Woods' nostrum but "guarantees" Woods' "system." Morse, on this side of the Atlantic, and Griffiths on the other side are both members of that serio-comic humbug, the "Society of Science, Letters and Art" of London. Hence they both have the privilege of writing "F.S.Sc. (Lond.)" after their names. This privilege costs one guinea but isn't worth it. In addition to the testimonial of "Dr." Griffiths and Dr. Morse, we have equally flattering comments both from Dr. Mary E. Webb, to whom we have already referred, and from Dr. John L. Corish. Dr. Corish, it may be said, is in the mail-order medical business himself and exploits "Dr. Corish's Okola Method," which is "the original and genuine system for treating eye strain at home."

THE SLIDING SCALE OF PRICES

Like all mail-order medical fakers, when Woods cannot get $10 for his "treatment" he takes less. In this case the price is gradually diminished until it reaches $1.00. It might be laid down as axiomatic that, those who will persist in want-

ing their money on mail-order medical fakes should make a practice of waiting six months after receiving the first letter. They will then find that, no matter how much is at first demanded, the price will have been reduced to one-fourth or even one-twenty-fifth of the original amount.

As was stated at the outset, Woods advertises on both sides of the Atlantic; in fact, his activity in Great Britain seems to be even greater than it is in this country. The chemists of the British Medical Association recently analyzed Woods' nostrums. The complete "treatment" for "curing drunkenness secretly" consists of sixty powders and sixty-eight tablets. The analyses of these is detailed as follows:

"The powders had an average weight of 9.9 grains, single ones varying from 7.2 to 11.9 grains. Analysis showed them to contain:

"Tartar emetic ..... 3.6 per cent.
"Sugar of milk..... 96.4 per cent.

"No trace of any other substance was found. A powder of average weight would thus contain 0.35 grain of tartar emetic.

"The tablets had an average weight of 1.6 grains. Analysis showed them to contain:

"Tartar emetic .....13.2 per cent.
"Boric acid .....10.7 per cent.
"Sugar of milk.....76.1 per cent.

"No trace of any other substance was found. One tablet would thus contain 0.2 grain of tartar emetic, and the daily dose of three powders and three tablets would contain 1.65 grains.

"The estimated cost of materials for 60 powders and 68 tablets is about 1d." (2 cents.)

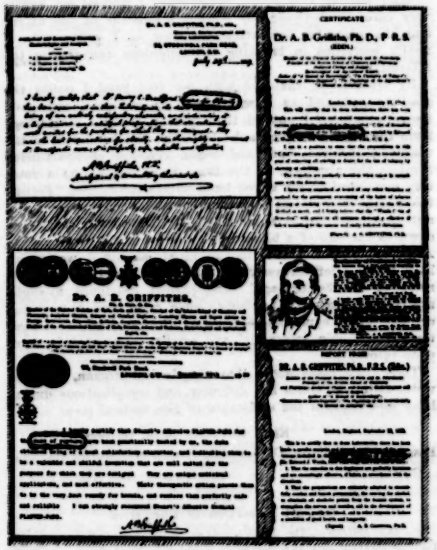


Fig. 2.—A few of Dr. Griffiths' analyses. Griffiths' price for analyses of quack remedies is $5.

Although Woods advertises to cure drunkenness in 72 hours, it takes about two weeks to consume all the powders and tablets that are sent as one "treatment." At the end of that time, the victim is told to order more.

"Even if six months are required to accomplish the desired purpose, it is a highly satisfactory reward for the expense, time and effort used."

Nor is Woods content to conduct his fraudulent business at long range. A few weeks ago he was fined $500—the maximum penalty—for practicing medicine in New York State without a license. His success as a mail-order quack seemed to have led him to believe that he was immune to arrest. Fortunately the New York County Medical Society is active in protecting the public from such humbugs and therefore brought suit against Woods, with the result just stated.

Edward J. Woods, then, who is willing to acknowledge that he "was rarely sober in sixteen years," is at present engaged in selling a mixture of tartar emetic and milk sugar under the fraudulent claim that it will cure alcoholism in 72 hours. As an accomplice, he has employed a woman physician who is a disgrace to her profession—a woman, who claims that Woods' nostrums cured Grover Cleveland of alcoholism—an inferential slander of a dead president that makes it easy to classify the concern that stands sponsor for it. By means of lying advertisements and fake analyses, Woods will rob the wives and children of inebriates on the specious claim that his worthless mixture when secretly given will release the father or husband from the thraldom of alcoholism. Week after week money that in many cases should go to purchase the necessaries of life is emptied into the coffers of a man whose past life he admits was a disgrace and whose present existence we believe is a calamity. Knowing that the chances are not one in a thousand that those who are, in their ignorance, trying secretly to cure members of their immediate family of alcoholism, will be willing to risk the publicity that a demand for the return of their wasted money would bring, Woods calmly continues his nefarious trade unmolested and unafraid

CONVICTIONS UNDER THE FOOD AND DRUGS ACT

A Few More Frauds that the Government has Exposed

HOXSIE'S CROUP REMEDY

"Dr. A. C. Hoxsie's Croup Remedy" was manufactured and distributed by the Kells Co., Newburgh, N. Y. The nostrum was sold under the claim that it would cure diphtheria and consumption as well as croup, whooping-cough, colds, etc. As the federal Food and Drugs Act is now interpreted by the Supreme Court, it is impossible to prohibit such cruel and vicious falsehoods as these. As the Hoxsie nostrum, however, contained over 31 per cent. of alcohol, while the label declared the presence of only 20 per cent., it was not difficult for the government to prove that the stuff was misbranded with regard to its composition. The concern pleaded guilty to the charge and was fined $50. [*Notice of Judgment No. 1218.*]

COCA CALISAYA

Cassebeer's Coca Calisaya, prepared by the Shepard Pharmacal Co., was sold as "an agreeable and efficient tonic" which was said to be capable of "sustaining the strength under extreme physical exertion." It was also asserted to be "peculiarly adapted to persons enfeebled by sickness or debility." The presence of 35 per cent. alcohol was declared on the label. Analyzed by the government chemists, it was found to contain over 42 per cent. alcohol, together with sugar, cocain, quinin and other alkaloids. As the amount of alcohol present was misstated on the label and as the quantity of cocain was nowhere given, the stuff was declared misbranded. The Shepard Pharmacal Co. that sold this vicious mixture pleaded guilty but for some reason, not evident from the government report, sentence was suspended. [*Notice of Judgment No. 1219.*]

MORSE'S CREAM

This nostrum was put out by Hazen Morse, New Rochelle, N. Y. The preparation was said to be a "Cod Liver Oil Cream" which was "artificially digested" and to possess "10 times greater nutritive value than cod-liver oil." Analysis by the government showed this preparation to be an emulsion consisting essentially of 39 per cent. cod-liver oil and 41 per cent. of water with small quantities of alcohol, oil of cassia, sugar and gum, the latter used as an emulsifying agent. The government declared—and proved—that Morse's Cream was an ordinary cod-liver oil, that it was not artificially digested and that it did not contain 67 parts of cod-liver oil. The defendant pleaded guilty and was fined $50. [*Notice of Judgment No. 1221.*]

Correspondence

Obstetrics Among American Indians

To the Editor:—Dr. Shoemaker's article on his obstetric experiences among the American Indians (The Journal, Jan. 6, 1912) recalled to my mind some similar cases which I observed during my service as physician among the Navajoes on the Navajo Indian Reservation, 95 miles from the railroad town of Flagstaff, Ariz. Many of these Indians have never seen a white man and naturally their customs and mode of living are most primitive. Until recently the native medicine-man prospered among this tribe by practicing his art of casting the evil spirits from his ignorant and unfortunate patients. In the last few years, however, the government through the agent and the physician has been discouraging this practice.

One afternoon an Indian policeman called at the agency and requested me to go with him and see his wife, who was in labor. As we approached his hut I heard the chant of the Indian medicine-man. On entering I could not see on account of the smoke from a fire on the ground in the middle of the hut, which filled the hut and irritated my eyes. About twenty Indians, men, women and several children, were seated on the ground on sheepskins in a circle about the fire, chanting.

Within the circle, close to the fire was a woman smoking a cigarette and the medicine-man alongside of her was leading the chant. This woman was my patient. She was sitting with her buttocks in the ground and I noticed a rope hanging by her side which was fastened to some of the timber overhead. This rope was used for the woman to pull on during the severe pains.

I noticed that she had an occasional light pain, during which she would stop smoking, frown and bend forward and remain in this posture until the pain had ceased; then she would straighten up again and resume her smoking. After about a half an hour I decided that there would be no delivery for some time and therefore I left the camp, instructing the Indians to call me if necessary. The following morning I was informed that the child was born some time during the night amid the chant of the audience and as everything progressed favorably I was not called. Under the circumstances I did not regret it. Three days later I was asked by the husband to treat the woman for severe headache from which she had been suffering since the time of labor. When I saw her she had a temperature of 103 with a correspondingly rapid pulse, coated tongue and constipation. I informed the husband of the serious condition of his wife and told him that unless she was taken to the agency hospital immediately where I could treat her without any interference I would have nothing to do with the case. He reluctantly consented. On examination at the hospital, I discovered that a portion of the placenta had remained in the uterus. After curettage and the usual care that these cases require, she recovered.

The next case is that of an adherent placenta with an hour-glass contraction of the uterus in a Hopi Indian woman, aged about 30. This was her fourth child, as I learned later, and on all three former occasions the white physician had to be called to remove the afterbirth.

One evening about 9:30 a Hopi asked me to see his wife, who had given birth to a child that morning. I found my patient lying on a pallet on the floor in one of the native adobe houses. I found that the cord was hanging out of the vagina, the uterus was enlarged and above the symphysis pubis; no fever. The end of the cord outside of the vagina was fastened around a portion, about six inches in length, of a branch of a tree. On inquiry I was told that this was for the purpose of preventing the cord from slipping back into the uterus. After assuring them that there was no danger of that occurrence, and discarding the stick, I gave her one dram of the fluid extract of ergot by mouth and practiced the Credé method of expression for some ten minutes, but without any success. I left one dram of the ergot with instruction to give it in four hours and notify me in the morning if the membranes had not been discharged by that time.

The following morning my Indian friend came to tell me that no change had occurred in his wife's condition during the night. Taking with me what I thought would be required, I rode down to the village again. I found that no change had occurred. I spread a clean towel on the floor in a convenient spot within reach of my right hand, as I had no assistant to call on to hand me any article. On this towel I laid some sterile gauze, a hypodermic syringe loaded with ergotin, a long dressing forceps and a vaginal speculum. I anticipated hemorrhage and wished to be prepared for it.

Then I cleansed the vulva as best I could under the circumstances and gave a vaginal irrigation of mercuric bichlorid 1-5000. I washed my hands with soap and water and then soaked them in a bichlorid solution for a few minutes, passed my left hand into the vagina and then gradually worked my way into the uterus; my right hand was placed on the abdomen over the fundus to steady the organ during my manipulations. The os was rather contracted and I experienced some difficulty in dilating it. My finger encountered another constriction and I then discovered that I had to deal with an hourglass contraction of the uterus.

After passing this second constriction I worked my fingers very carefully between the mucous membrane of the uterus and the placenta, separating the two as I progressed. I finally succeeded in breaking the adhesions and freeing the afterbirth.

By traction on the cord with my free hand I pulled the placenta out and as I was about to withdraw my hand from the uterus I noticed that quite a profuse hemorrhage from the organ had occurred. With my left hand still in the uterus, I injected ergot and began massage of the fundus through the abdomen, at the same time keeping up a rotatory movement of my closed hand within the uterus. Feeling the organ contracting, I gradually withdrew my hand but still continued the external massage. The uterus contracted down to the size of a billiard ball and the hemorrhage ceased. After applying a binder in the usual manner I waited an hour before I left to ascertain that there would be no recurrence of the hemorrhage. The patient developed a slight septic condition with headache, some fever and a foul discharge. These symptoms cleared up after rest in bed, irrigations and quinin internally, and finally terminated in complete recovery.

These two cases show that the Indian woman, like her white sister, at times has difficulty and complications during labor and requires the assistance of the medical man.

Emil Krulish, M.D., Galveston, Tex.,
Passed Asst. Surgeon, U. S. Public Health and Marine-Hospital Service.

Medical Education in Obstetrics

To the Editor:—Dr. J. Whitridge Williams' paper on medical education and the midwife problem (The Journal, Jan. 6, 1912, p. 1), is a frank and fair statement of the facts concerning the teaching and practice of obstetrics in this country. These facts explain to a large extent the cause of the high infant mortality at birth and during the first few weeks of life. It is to be hoped that thoughtful medical men, interested in this side of surgical practice, will consider well the significance of such an investigation.

Dr. B. B. Browne, in his letter (The Journal, Jan. 27, 1912, p. 296) emphasizes rightly the necessity for more practical experience for every medical student in the teaching of obstetrics, but fails to give due emphasis to the equally important duty of a professor in a university medical school—that of advancing the science and art of his branch.

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It has been my peculiar good fortune to see the obstetric work of Johns Hopkins from what may be considered three different points of view: As an outsider, trained in another school and a larger clinic; as an insider, while obstetric house officer at the Johns Hopkins Hospital; and as one of the community serving on a committee to investigate the midwife situation in New England, thus appreciating the great need of the community for better and more intelligent obstetric care.

As an outsider, with a previous hospital experience of perhaps 200 cases, including a fair amount of operative experience, and a year of study and observation in the clinics abroad, I came to Johns Hopkins with the appointment of obstetric house officer. I was first struck with the lack of responsibility (one of our best teachers) allotted to student and house officer, the greater part being carried by resident and assistant resident physicians; then, with the absence of the specially trained obstetric head-nurse; again, with the limited number of cases, which gave each student the chance to see, but not to deliver, only five or six cases in the ward, while giving him the opportunity to deliver perhaps an equal number on the outside service. The student was fortunate if he saw a single operative case. Two positions were open for one year as house officer, but even in this position little or no operative experience was obtainable, as this was reserved for resident physicians and staff.

As an insider, after working for a few weeks in the clinic, other things came to my attention which I had at first not noted. 1. The care with which the pelvis was studied was most satisfying. Every pelvis was measured internally and externally, first in the dispensary, later in the ward before and after labor; thus three or four men checked up the measurements. The child's head was measured immediately after birth and again three days later. 2. Prenatal care in the dispensary was a new experience for me and one of the most instructive and valuable of my service. I believe that the student, the coming practitioner of obstetrics, should share the advantages of this training, if this could be arranged. 3. Toxemic, nephritic and other pathologic pregnancies and labors were studied and treated with special attention. 4. The arguments for and against pubiotomy were being tested. 5. The handling of the cases of the district by the house officer, with the assistance of a student and nurse, gave opportunity for teaching and learning which was marred only by the few cases handled. Thus it may be seen that all cases both in the ward and on the district were used to their utmost for teaching. 6. Fortnightly conferences of the house staff were held, when the history of each of the difficult cases was read and fully discussed. Owing to Dr. Williams' interest, encouragement and enthusiasm, instead of being a perfunctory ceremony, this was a most stimulating exercise. Here particularly was opened to me Dr. Williams' keen appreciation of the practical problems.

The lay point of view has been brought home to me since leaving Hopkins. Sociologic and charitable societies are asking, quite properly, why infant mortality, particularly in the first few weeks of life, is so high. Prominent above other causes stands poor obstetric care, owing to the poorly-trained physicians and midwives—the sign of economic depravity and ignorance in a community. For example, in 1910, in New York City, over 50,000 women were delivered by midwives, while at the same time Dr. Edgar says there are not sufficient cases in the hospital clinics to properly instruct the medical students and nurses. A similar condition exists on a smaller scale in Baltimore. Do we not find the same inconsistency in every large community? Are there not sections of our cities in which many needy women are to be found to whom the teaching clinics should be capable of giving proper care? Is the obstetric knowledge of these communities used to anything like its capacity? Would it not be possible to determine the growing need of our community and meet this by an ever enlarging system of dispensary care to the advantage of all concerned?

To recapitulate: Dr. Williams' article has directed attention to the grossly inadequate teaching, throughout this country, of obstetrics, that branch of surgery most vitally important to the healthy growth of the community, by which its women are exposed to great dangers in the months of childbearing. Dr. Browne's letter emphasizes the dissatisfaction with such training.

Taking the Johns Hopkins Obstetric Department as an example, we find lack of sufficient means and facilities for anything like adequate practical teaching in the care of even the normal case for the large number of students. We find, however, that Dr. Williams, although realizing all this, has dared to perform the even greater function of a real university professor by stimulating and carrying on research work and investigations looking to the advance of the science and art of obstetric practice, the substantial results of which are shown by his text-book, his many monographs, as well as by the interest, enthusiasm and encouragement with which he has inspired many men to the highest ideals in obstetrics.

While we may regret the lack of means to teach every student the large amount of practical knowledge necessary to insure the proper care of the normal case, and are planning to meet this lack of efficient service to the community, we must not lose sight of the even wider sphere of usefulness, the work of training advanced students and stimulating progressive investigation in the science of obstetrics in our large medical schools.

ARTHUR B. EMMONS, M.D., Boston.

The Army Canteen

To the Editor:—The opponents of Dr. Keen's canteen policy are, in my opinion, rather severe on him, and also fail to recognize his point. This, in a nutshell, is that we must choose the lesser of two evils. Like Dr. Keen, I am decidedly in favor of the lesser, the canteen. The British regular army numbers 260,000 men, or almost five times the number in the U. S. Army. The former maintains the canteen and drunkenness decreases yearly; the U. S. Army abolished the canteen, drunkenness has increased and barracks (take, for instance, those at Plattsburg, N. Y.) have become surrounded by saloons. In the British army with its canteen the cases of syphilis have decreased in number; in the U. S. Army they have gone up very high, and then down, but are still higher than in 1903. Do not these facts prove that the canteen was a wiser policy than the no-canteen? Is it not the lesser evil? Which do Drs. Johnston and O'Neil prefer, the greater or the lesser, impractical theory or practical practice?

Arguments in favor of improving the recruiting standards are theoretical and not practical. In some years it has been almost impossible to obtain recruits, in fact impossible in some regiments. Even now it is difficult to maintain the Army at decent strength. The National Guard has an establishment of 200,000; but is with difficulty maintained at half that strength. Is it therefore wise or unwise to demand further requirements of recruits? In our northern neighbor, Canada, the military spirit is much stronger, the militia numbering 55,000 to a population of 8 millions. In proportion this is six times as large as our National Guard. The organization is better but the men are of the same various classes as the National Guard. Every small city has at least one complete regiment. As a comparison, my own city, Akron, has two companies and the band of the Eighth Ohio Regiment. Hamilton, Ont., with the same population, has a squadron of cavalry, a field battery, a field troop of engineers, two regiments of infantry, a company of army service corps, two companies army medical corps, and some guides. Each year new regiments are organized. Even with such strong military spirit the abolition of canteens at camps has been a cause of complaint. The men are not bums and the camp is not an orgy; but they believe that a man should be able to have a beer if desired after six hours' drill in the sun. If unable to obtain it in the camp he goes into town, gets more than one, and there are more drunkards than in the canteen days. In the Canadian regular army (permanent force) of 5,000 men the canteen has wisely been retained and no better-behaved men are found than Canadian soldiers in garrison cities.

Former zealous anticanteenists now demand its reestablishment in the camps. Thus we have, for comparison, the results in Great Britain, the United States and Canada.

The man who wants a drink will get it somewhere. Is he to get it in the canteen or to go to a joint and get cheap poison slop? I do not approve of booze, but give me the canteen system. As to my qualifications to judge, I had fifteen years' service in the Canadian militia, retiring in 1907 with the rank of captain. During the South African war I served with the 2nd Battalion Royal Canadian Regiment Infantry. World-famous generals, like Field-Marshall Earl Roberts, Gen. Sir H. S. Smith-Dorrien, and Lieut.-Gen. Sir F. Forestier Walker, pronounced this the equal of any army regiment in the world. The smallest man in it was 5 feet, 7 inches, but few were that small, over 50 per cent. being "six footers," the balance 5 feet 11 inches and 5 feet 10. Few were temperance men, but this regiment drove every enemy before it. Canada's army is the only one in the world never defeated in war and Canadian troops the only ones that have not surrendered. Canada has the canteen where her soldiers may drink beer if they choose. The model fearless, law administrating Royal Northwest Mounted Police of Canada have canteens in their barracks. The "Rough Riders" were not blue-ribbon men but they receive (rightly or wrongly) the credit for Santiago. These remarks are not irrelevant but prove that even beer in peace can fight in war. Though now retired, my interest in military matters is as keen as ever. Surely I am able to judge after theoretical and practical experience with many armies in four continents, as well as my former British comrade, P. J. H. Farrell. Booze in war and the canteen in peace are different questions. The subject under discussion is not war booze but the army canteen in peace. Like Dr. Keen, I am temperance in sympathy but I vote with him for the canteen.

A. S. McCORMICK, M.D., Akron, O.,
Late Captain, Third Regiment, "Victoria Rifles of Canada."

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

THE BASS-WATKINS TYPHOID TEST

To the Editor:—Please tell me the diagnostic value of the Bass test in typhoid fever. Also, how soon is it present?
WILLIAM H. SMITH, Goldsboro, N. C.

ANSWER.—The Bass-Watkins quick macroscopic typhoid agglutination test, according to the authors, has exactly the same diagnostic value as has the standard Widal reaction; it appears and disappears at the same time as does the Widal. The value of the test lies in the fact that it may be made at the bedside in one to three minutes, without the aid of a microscope or other laboratory equipment and without laboratory training. This is accomplished by employing a very concentrated suspension of dead typhoid bacilli and, of course, a correspondingly concentrated dilution of the patient's blood to be tested. As a result of the concentration, agglutination occurs in less than two minutes and the clumps of agglutinated bacilli are large enough to be seen plainly with the unaided eye.

The Widal, or the Bass-Watkins test, is positive in only a small number of cases of typhoid before the end of a week or ten days. It is positive in 70 to 80 per cent. of all cases by the end of the second week. Over 90 per cent. give a positive reaction at some time during the course of the disease. About 5 per cent. never give a positive reaction.

The original article on this subject, by Bass and Watkins, appeared in the *Archives of Internal Medicine*, December, 1910, page 717. In the *Southern Medical Journal* (February, 1911, page 160), Bass summarizes the reports of 128 physicians who had tried out the test as follows: "Two men report three cases of positive Widal and negative macroscopic reaction. Of the 652 cases tested by these physicians to date, which can be tabulated, 363 were on cases the subsequent histories of which proved that they were typhoid, and 289 were on non-typhoid cases. Of the 363 typhoid cases, 322 gave positive reactions and forty-one negative. Of the 289 non-typhoid cases, thirty-two were thought to be positive. A few of these were diagnosed as continued malarial fever or as having had typhoid fever previously."

NATIONAL BOOK COMPANY

To the Editor:—What do you know about a concern calling itself the National Book Company? H. C. MINOR, Toronto, Ohio.

ANSWER.—The National Book Company of Milwaukee, Wis., (but incorporated in Arizona) is supposed to issue the "National Medical Register," whatever that may be. It seems to be a subsidiary concern of the National Mercantile Rating and Credit Agency of Milwaukee, whose alleged business is to obtain information regarding the financial and general standing of firms and individuals. It seems to do business chiefly with physicians who, after signing a contract, are said to become "confidential agents" for the concern. Such physicians have to subscribe for five shares of stock in the National Book Company at $2 a share. The contract states that it may be terminated by either party on thirty days' notice and that when terminated, the National Mercantile Rating and Credit Agency shall be given the "right and option to purchase" the shares of stock owned by the physicians signing the contract at the price previously paid for it, plus interest at 6 per cent. The impression may thus be given that the physician who wishes to terminate his contract may, at any time, by giving thirty days' notice, get his money out of the concern. A more careful reading, however, shows that the buying back of such stock by the company is purely optional. On the face of it then, it seems that this concern gets the use of the physician's money while the physician in return gets a pretty stock certificate and the privilege of calling himself a "confidential agent" of the National Mercantile Rating and Credit Agency.

NORWEGIAN AND DANISH MEDICAL JOURNALS

To the Editor:—Kindly give the addresses of the more important Norwegian and Danish medical journals, together with any other information concerning them. F. A. OLSON, St. Paul, Minn.

ANSWER.—Some of the periodicals you wish are as follows:

Hospitalstidende; publisher, Jacob Lunds Boglade, Pilestrade 6, Copenhagen, Denmark. Editor, T. Rovsing. Weekly; price, $8.25 a year, plus postage.

Ugeskrift for Læger; publisher, Den alm. danske Lægeforenings Bureau, Gl. Strand 44, Copenhagen, Denmark. Editors, H. Mygind, V. Scheel and H. Maag. Weekly; price, $5.35 a year, plus postage.

Norsk Magazin for Lægevidenskaben; publisher, Steen'ske Boktrykkeri, Christiania, Norway. Monthly; price, $5 per volume, plus postage.

Tidsskrift for den Norske Lægeforening; publisher, Centraltrykkeriet, Christiania, Norway. Editors, P. Anser and R. Hansson. Price, $4.05 a year, including postage.

By keeping watch over the above, as listed in our Department of Current Literature, a good estimate of the contents of the periodicals can be obtained.

MORO'S TUBERCULIN TEST

To the Editor:—Will treatments by hypodermic injections of tuberculin emulsion over quite an extended period cause Moro's cutaneous ointment to give positive reaction? I do not know the strength of the emulsion used or the length of time the treatment was carried on. J. HARTMAN, M.D., Crete, Neb.

ANSWER.—Moro's tuberculin test by means of tuberculin ointment is a very sensitive one, almost as sensitive as von Pirquet's cutaneous reaction, and consequently it would be exceedingly difficult, if not impossible, to determine whether, in a given case, a positive reaction was dependent on an old obsolete tuberculous focus or on recent sensitization through hypodermic injections of emulsion of tubercle bacilli. Theoretically, injections of bacillary emulsion might well sensitize to such an extent that a cutaneous tuberculin reaction could be obtained.

KOSSEL RECEIVED NOBEL PRIZE IN MEDICINE

To the Editor:—Who was the Nobel prize man in medicine in 1910? Where can I secure some information in regard to the work on which the prize was awarded?
JOHN E. BROWN, Columbus, O.

ANSWER.—The Nobel prize for medicine was awarded in 1910 to Professor Albrecht Kossel, Geheimer Hofrat and director of the Physiologic Institute at Heidelberg. He has been

a pioneer in physiologic chemistry as an important part of biology and theoretical medicine and as a science independent of organic chemistry. The latter aims more for synthesis, while physiologic chemistry seeks to isolate the active elements in the body tissues and fluids and analyze them; synthesis is merely the final test for the accuracy of its findings. It is in the application of these principles that Kossel has preeminently distinguished himself. An interesting review of his works and what he has accomplished was given in the *München. med. Wchnschr.*, Dec. 13, 1910, page 2644.

QUADRANT LIGHTING OF SCHOOLROOMS

To the Editor:—The report of the Committee on School Inspection (THE JOURNAL, Nov. 25, 1911, p. 1756) says: "Unilateral or quadrant lighting has come to stay as the standard. With it has come the standard of not less than twenty or more than twenty-five square feet of floor space as the lighting area." What is meant by quadrant lighting, and by twenty or twenty-five square feet of floor space? Certainly the average schoolroom of 24 by 32 feet requires more than twenty or twenty-five square feet of lighting. Does it mean 20 or 25 per cent. of the floor space for windows?

GEORGE H. HEITMULLER, Washington, D. C.

ANSWER.—These questions were referred to Dr. George L. Leslie, of the committee, who says: "There seems to have been a mistake in the original report of Mr. Chancellor, superintendent of schools at Norwalk, Conn., as published in the 'Proceedings of the American School Hygiene Association' for 1909, page 194. That the window surface should be not less than 20 per cent. nor more than 25 per cent. of the floor space is the commonly accepted fact with regard to the matter.

"Unilateral or quadrant lighting means windows on one side of the schoolroom only. I believe in windows both at the side and the back of the rooms wherever possible. I summarized Superintendent Chancellor's report, as given in the 'Proceedings of the American School Hygiene Association' because as a whole it was excellent."

TREATMENT OF ASTHMA AND THE VALUE OF THIS DEPARTMENT OF THE JOURNAL

To the Editor:—Some time ago I wrote you, asking information relative to the treatment of asthma. As the matter was entirely for my own personal benefit, I enclosed a self-addressed and stamped envelope for reply, it being rather more than I could expect that you should devote any considerable amount of your valuable space to answer a question of one subscriber. You can imagine my surprise, therefore, when I found more than half a column devoted to answering my queries. I soon realized, however, that it was not I alone who was being benefited by your response to me, for I have since received thirteen letters from physicians in different parts of the country, offering suggestions gathered by their years of experience in treating asthma in its various forms, and all this, mind you, without solicitation on my part and without hope of reward. Most of them, I might add, were themselves asthmatics.

When men go to the trouble to write long letters to total strangers, detailing their experience in treating a disease like this, and that from the goodness of their hearts alone, it makes me feel that the milk of human kindness is not entirely dried up, and, further, that medicine is to-day, as it always has been, "the noblest and greatest of all professions."

I thank you for your kindness in this matter and take this means of thanking the many physicians who so kindly contributed their part to the general fund of knowledge on the subject.

M. H. FARMER, Virden, Ill.

The Public Service

Medical Department, U. S. Army

Changes during the week ended Feb. 9, 1912.

Suggs, Frank, M.R.C., granted one month and seventeen days' leave, and relieved from active duty, to take effect at expiration of absence.

Perley, Henry C., colonel, granted leave of absence for two months on surgeon's certificate of disability.

Lauderdale, Clarence E., dental surgeon, will proceed to the Walter Reed General Hospital, D. C., for observation and treatment.

Feely, J. F., acting dental surgeon, left Fort Hancock, N. J., en route to Fort Wadsworth, N. Y., for temporary duty.

Stone, Frank P., dental surgeon, reports for temporary duty at Fort McPherson, Ga.

Ireland, M. W., lieut. col., ordered to attend the eighth annual educational and legislation conference of the American Medical Association, Chicago, Feb. 20, 1912.

Long, C. J., dental surgeon, February 6, resignation accepted this date.

Stuckey, H. W., M.R.C., ordered to Philippines; amended so as to sail March 5 instead of April 5, 1912.

Stallman, G. E., dental surgeon, left temporary duty at Fort McIntosh, Tex., en route for temporary duty at Fort Sill, Okla.

Long, C. J., dental surgeon, left Fort Andrews, Mass., en route home, to Rock Island, Ill., his resignation having been accepted February 6.

Feely, James F., acting dental surgeon, reported for temporary duty at Fort Wadsworth, N. Y.

Medical Corps, U. S. Navy

Changes during the week ended Feb. 10, 1912.

Payne, J. H., A. A. surgeon, detached from the marine recruiting station, Boston, and ordered to the marine recruit depot, Norfolk, Va.

Rodman, S. S., surgeon, detached from the *Rhode Island* and ordered to the *Minnesota*.

Seaman, William, surgeon, detached from the *Minnesota* and ordered to the *Rhode Island*.

Hayes, Oscar, A. A. surgeon, resignation accepted from Feb. 12, 1912.

U. S. Public Health and Marine-Hospital Service

Changes for the week ended Feb. 7, 1912.

Cofer, L. E., asst. surgeon general, directed to proceed from New York to Providence, R. I., for conference relative to maritime quarantine at the port of Providence.

von Esdorf, R. H., P. A. surgeon, directed to return to Mobile, Ala., from Houston, Tex., stopping at Shreveport, Alexandria, Baton Rouge and other points in Louisiana, on the request of the president of the state board of health, to lecture on cerebrospinal meningitis.

Billings, W. C., P. A. surgeon, granted one month's additional leave from Feb. 16, 1912.

Lloyd, B. J., P. A. surgeon, directed to confer with the health commissioner of the State of Washington, and to proceed to Tacoma, Wash., if found necessary, for conference relative to campaign against rats in the City of Tacoma.

de Valin, Hugh, P. A. surgeon, relieved from duty in plague work and directed to report to the medical officer in command at the Marine Hospital, San Francisco, for duty and assignment to quarters.

Kearny, R. A., asst. surgeon, relieved from duty at the Marine Hospital, San Francisco, and directed to proceed to Juneau, Alaska, and report to the commanding officer of the Revenue Cutter *Rush* for duty.

Stiles, C. W., professor of zoology, detailed to address the Association of Elementary Schools of South Carolina on the subject of school sanitation, March 30, 1912.

Medical Education and State Boards of Registration

COMING EXAMINATIONS

CONNECTICUT: Regular, City Hall, New Haven, March 12-13. Sec., Dr. Charles A. Tuttle; Homeopathic, Grace Hospital, New Haven, March 12. Sec., Dr. Edwin C. M. Hall, 82 Grand Ave.; Eclectic, Hotel Grace, New Haven, March 12. Sec., Dr. T. S. Hodge, 19 Main St., Torrington.

MAINE: City Council Rooms, Portland, March 12-13. Sec., Dr. Frank W. Searle, 770 Congress Street.

MASSACHUSETTS: State House, Boston, March 12-14. Sec., Dr. Edwin B. Harvey, Room 159, State House.

WYOMING: Riverton, March 13-15. Sec., Dr. Albert B. Tonkin.

Pennsylvania Single Board of Medical Examiners

By the new medical practice act in Pennsylvania, a single board, the "Bureau of Medical Education and Licensure," was created Jan. 1, 1912. This displaced the three separate boards, regular, homeopathic and eclectic, which formerly had in charge the examination and licensing of physicians. The new board has seven members, two of whom, the superintendent of public instruction and the commissioner of health, are members ex officio. The remaining five were appointed by the governor, one from each of the regular, homeopathic and eclectic state medical societies. The two remaining members are not to represent the same school of practice. Two members were appointed for a term of one year, two for two years, and one member for three years. Hereafter all members will be appointed for three years.

The ex-officio members are Superintendent of Public Instruction Nathan C. Schaeffer and Commissioner of Health Samuel C. Dixon. The other members are John M. Baldy, M.D., president, Philadelphia; Daniel P. Maddux, M.D., Chester; Gustave A. Mueller, M.D., Pittsburgh; Calvin L. Johnstonbaugh, M.D., Bethlehem, and Adolph Koenig, M.D., Pittsburgh. The secretary is Nathan C. Schaeffer, Superintendent of Public Instruction, Harrisburg.

At a meeting of the board held January 12, work was begun toward registering all the medical practitioners of the state as required by the practice act. The medical schools of the state, seven in number, are to be inspected by representatives of the board. A resolution was adopted requiring that after Jan. 1, 1913, every applicant for license to practice medicine in Pennsylvania must show evidence of having attended at least six maternity cases before graduation. The next examination of applicants for license was fixed for May 20-23, 1912.

New Site for Albany Medical College

It is reported that the Board of Supervisors of Albany County, New York, have decided to transfer a part of the old penitentiary grounds to the trustees of the Albany Medical College as a site for a new medical building which, according to the terms of the resolutions, must be built within three years. It is also provided that the college shall maintain as a part of its course of instruction medical and surgical clinics for the free treatment of poor patients who are residents of the county. The new campus will bring the Albany Medical College in close proximity to the Bender Laboratory and the Albany General Hospital.

Additional Endowment for McGill University

A letter from W. Vaughan, secretary of McGill University, Montreal, states that the following subscriptions have recently been received for the Medical Faculty:

For the endowment of the chair and department of anatomy, $100,000 from Mr. and Mrs. Robert Reford.

For the maintenance of the laboratory of pharmacologic research, $10,500 from Mr. David Morrice and Mr. R. B. Morrice, in memory of Edward McDougall Morrice, and also a sum of $1,000 from Dr. A. D. Blackader.

To found a research fellowship in pathology, $25,000 from Dr. James Douglas of New York.

Maryland December Report

Dr. J. McPherson Scott, secretary of the Maryland Board of Medical Examiners, reports the written examination held at Baltimore, Dec. 12, 1911. The number of subjects examined in was 9; total number of questions asked, 90; percentage required to pass, 75. The total number of candidates examined was 43, of whom 27 passed and 16 failed. Seven candidates were licensed through reciprocity and one by special examination. The following colleges were represented:

PASSED	Year Grad.	Per Cent.
Howard University, Washington, D. C.	(1908) 76; (1911)	79
Georgetown University	(1910)	87
College of Physicians and Surgeons, Baltimore	(1910) 79, 87; (1911) 75, 76, 77, 78, 81, 82.	
Maryland Medical College	(1909) 76; (1910) 75; (1911) 78, 78, 81.	
Johns Hopkins University	(1908) 82; (1909) 82; (1910) 92; (1911) 79.	
Baltimore Medical College	(1911)	73
University of Maryland	(1910) 82; (1911) 83,	83
University of Pennsylvania	(1911)	78
University of Nashville	(1907)	75
University of Virginia	(1902)	86

FAILED	Year Grad.	Per Cent.
Georgetown University	(1911)	69
Howard University	(1911)	67
University of Maryland	(1905) 61; (1910) 71; (1911) 69,	71
Baltimore Medical College	(1908) 71; (1911) 71,	72
Maryland Medical College	(1906) 65; (1910) 54,	60
Baltimore University	(1902)	20
Woman's Med. College of Pennsylvania	(1910) 59; (1911)	71
Meharry Medical College	(1911)	53

LICENSED THROUGH RECIPROCITY	Year Grad. with	Reciprocity
University of Louisville	(1907)	W. Virginia
Baltimore Medical College	(1893) W. Virginia; (1910)	Michigan
University of Maryland	(1903)	Virginia
Maryland Medical College	(1909)	Maine
College of Physicians and Surgeons, Baltimore	(1893)	W. Virginia
Jefferson Medical College	(1911)	Delaware

LICENSED BY SPECIAL EXAMINATION	Grad. Year
University of Pennsylvania	(1907)

The following questions were asked:

ANATOMY

1. Describe the occipital bone. 2. Name the carpal bones. 3. Name varieties of articulations; give example of each. 4. Give origin and distribution of great sciatic nerve. 5. Give origin, insertion and nerve-supply of quadratus lumborum, brachialis anticus, orbicularis palpebrarum and sartorius. 6. Describe the epithelium of the pharynx. 7. What glands are in the small intestines and where located? 8. Describe a villus. What is its function? 9. What arteries form the circle of Willis? 10. What and where is the pituitary body?

PHYSIOLOGY

1. What is meant by the physiologic effect of a drug? 2. Into what general classes are foods divided? Give examples of each. 3. What effect has starvation on the proteids? 4. (a) What is animal heat? (b) What relation exists between the temperature of the body and the pulse? (c) What is the difference between warm and cold blooded animals? 5. What is meant by nerve cells and nerve fibers? (b) Define afferent, efferent, trophic, inhibitory, motor and vasomotor nerve fibers. 6. What is meant by diffusion and osmosis? 7. What is meant by absorption and nutrition? 8. Which organs of the body secrete and which excrete? 9. Describe the method of producing artificial respiration. 10. What is the composition of saliva, gastric juice, blood and urine?

CHEMISTRY

1. Define: (a) reagents, (b) valence, (c) crystalloid, (d) colloid, (e) atom. 2. Give the chemical name and composition of "laughing gas"; how is it obtained and what are its properties? 3. Give one chemical antidote for each of the following: (a) antimony, (b) lead acetate, (c) cocain, (d) morphin, (e) phenol. 4. Describe in detail the examination of a sample of urine for the detections of bile, sugar and albumin. 5. (a) What are metals? (b) What are non-metals? (c) What are amalgams? (d) What are indicators? 6. Give the chemical formula of each of the following: (a) nitric acid, (b) boric acid, (c) sodium bromid, (d) zinc oxid, (e) calomel. 7. What is glycerin? What is its source in nature? How is it obtained and what are its properties? 8. (a) What is an alcohol? (b) What is an alkaloid? (c) What is a salt? (d) What is a hydrocarbon? 9. Give the "law of constancy of composition." 10. Complete the following equations: $NH_3 + HCl =$ ——. $MgO + H_2SO_4 =$ ——. $2KOH + H_2SO_4 =$ ——. $NaOH + HCl =$ ——. $Na_3PO_4 + 3AgNO_3 =$ ——.

PATHOLOGY

1. Ascaris lumbricoides. Describe briefly life cycle and characteristics. Mention two or more dangerous conditions brought about by infection with this parasite. 2. Mention at least four varieties of ulceration seen in the gastro-intestinal wall. Describe the gross appearance of an amebic ulcer. 3. What are the dangers inherent to diseased tonsils? 4. What is meant by active congestion? Passive congestion? Give an example of each. 5. Trace the probable course of events which follow chronic obstruction of the urethra. 6. Given a slide supposed to be smeared with gonorrheal pus, how would you proceed to establish the fact? 7. On what principle does vaccination against typhoid depend? How is the vaccine prepared? 8. Describe the process of repair in an uninfected fracture of bone. 9. Describe the exudate in an pneumonic lung in the stage of red hepatization. 10. Define, explain and give examples of exudate and transudate.

PRACTICE

1. Define: (a) Von Graefe's sign, (b) uremia, (c) arteriosclerosis, (d) cirrhosis of the liver, (e) angina pectoris. 2. Define: (a) dysphagia, (b) hematuria, (c) hemoptysis, (d) laryngismus stridulus, (e) pertussis. 3. What diseases most commonly occur in the right inguinal region? 4. Differentiate neuritis and rheumatism. 5. Differentiate diphtheria and acute follicular tonsillitis. 6. Differentiate rubella, rubeola and scarlatina. 7. Differentiate intestinal colic, uterine colic and renal colic. 8. Give treatment of angina pectoris. 9. Give treatment of lobar pneumonia. 10. Give treatment of acute dysentery.

SURGERY

1. Name the varieties of fractures of vault of cranium. Prognosis and treatment. 2. Name the different varieties of fractures, their etiology, symptoms and complications. 3. Give a classification of dislocations with the etiology, predisposing cause and anatomic peculiarity of each. 4. Give indications for operative treatment of fractures. 5. Give the early diagnosis of exophthalmic goiter. 6. Differentiate between obstruction of common and cystic ducts. 7. Describe glaucoma. Give signs and treatment. 8. Define hemoma, aneurysm, thrombus and embolus. 9. Indications and contra-indications for salvarsan in treatment of syphilis. Technic of your method of administration. 10. Causes and treatment of acute otaigia.

THERAPEUTICS

1. Give therapeutics of hypodermoclysis and method of administration. 2. Write a prescription in Latin, without abbreviation, containing four ingredients which you would use for an acute bronchitis, and give directions for using same. 3. Write a prescription in Latin, without abbreviation, containing three ingredients which you would use for diarrhea, and give directions for using same. 4. Give the therapeutics of eserin and usual method of administration. 5. Give therapeutic uses of three zinc salts and name antidotes for zinc poisoning. 6. Name the official preparations of oxygen and give their therapeutic uses. 7. Give the therapeutics of three preparations of ammonium and name them. 8. What is meant by "gastric tonic" or "stomachic"? Give indications for use and mode of action. 9. Give the therapeutics of H_2O, hot and cold. 10. Give the physiologic action and therapeutics of aconitum.

MATERIA MEDICA

1. Iodin: (a) how obtained; (b) the official preparations. 2. (a) What is black wash? Yellow wash? (b) What are wines? (c) What is the difference in the preparation of lozenges, tablets and triturates? Name some of the official lozenges. 3. (a) What is the difference between anesthetics and anodynes? Name some of each most generally used. (b) What is the difference between liniments and lotions? Name some of the official. 4. Give the average dose of aconite, tincture of nux vomica, tincture digitalis, tincture opium, tincture veratrum. 5. To what class of drugs does bismuth belong? What are the official preparations and doses? 6. What is the difference between irritants and counter-irritants? Name the most important. 7. Name six preparations of iron and their doses. (b) What are the incompatibles of iron? 8. Write a prescription containing iron, arsenic, strychnin and quinin, using the official terms, and state when best administered. 9. Write a prescription containing tincture aconite, sweet spirits of niter, spirit of Mindererus, using the official terms. 10. Silver, its official preparations and doses. What are the incompatibles of silver?

OBSTETRICS

1. Name the sutures of the fetal head. 2. What precautions should be taken against septic infection during labor? 3. Indications for use of forceps and mode of application. 4. What are the objections to the use of ergot and stimulants in labor? 5. How would you prevent perineal tears during labor and delivery? 6. What are the varieties of placenta prævia? 7. Outline the care of the navel. 8. Describe some of the best substitutes for mother's milk. 9. What are the different forms of endometritis? 10. Mention the varieties of vaginitis and their treatment.

Medical Economics

THIS DEPARTMENT EMBODIES THE SUBJECTS OF POST-GRADUATE WORK, CONTRACT PRACTICE, LEGISLATION, MEDICAL DEFENSE, AND OTHER MEDICOLEGAL AND ECONOMIC QUESTIONS OF INTEREST TO PHYSICIANS

MEDICAL CIVICS

A movement which gives promise of filling a distinct need in the present situation has been inaugurated in Cincinnati in the Medical Civics Association. On the night of January 31, about 200 men, about equally divided between physicians and laymen, launched this new association. Dr. Charles A. L. Reed was made temporary chairman. In taking the chair Dr. Reed said, in part:

Most important civic movements could be promoted by bringing the people and the physicians in closer contact with each other. Nearly every great civic activity in the interest of health and efficiency of the people is but an effort to make practical application of the great discoveries of medical science.

The great antituberculosis campaign already being crowned with success; the crusade against other preventable diseases, such as typhoid fever, diphtheria and scarlet fever; the medical inspection of schools; the protection of the newly born from blindness; the fight for pure food and drugs; the social science work, and the activities represented by the Red Cross are but examples of organized efforts to apply the truths of medical science in a broad way to the betterment of the people. The sanitation of existing tenement houses and the construction of new ones on hygienic lines is a question of first social importance. The ethical relations between the medical profession and society need to be better understood by both parties.

WHAT THE AMERICAN MEDICAL ASSOCIATION STANDS FOR

The future of medical education in this community depends on a popular appreciation of its civic importance.

The organization that is contemplated here to-night is to be an open court, where every subject embraced under the title of medical civics may have the benefit of every viewpoint. One point I must make particularly clear, and that is that this proposed organization is not antagonistic to any other organization devoted to any of the objects that I have indicated, but, on the contrary, seeks in an educational way to help all of them.

The objects of the association, as set forth in the constitution, are to promote the establishment of a national department of health; to promote and protect necessary health legislation in municipality, state and nation; to sustain and perfect state and national laws for the protection of purity in food products; to advance the status and scope of medical education; to encourage scientific research and disseminate knowledge relative to the nature, causes and prevention of diseases; to cultivate ethical relations between the medical profession and the public; to do such other things as may tend to promote the health, longevity and efficiency of the people, and to cooperate with any or all civic organizations devoted to these or similar objects.

Membership is open to members of the medical profession and to those of the laity who are in sympathy with the declared objects of the association.

The following standing committees are provided for: national department of health; meetings, lectures and methods of popular instruction; health legislation; food and drug legislation; antituberculosis crusade; medical education, university extension and scientific research; milk commission; municipal health administration and medical inspection of schools; social science work and ethics; cooperation with other civic bodies and the Red Cross. Special committees on other subjects will be appointed from time to time.

POSTGRADUATE COURSE

Sixth Month—Fourth Weekly Meeting

PSEUDOLEUKEMIA, HODGKIN'S DISEASE[1]

PATHOLOGIC ANATOMY: Lymph-nodes. Chains usually involved, gross appearances, size, density, periadenitis, infiltration. Microscopic changes, lymphadenoma.

Spleen: Microscopic changes. General distribution of lymphomata. Changes in bone marrow and liver. Relation of pathologic changes to malignant disease and to tuberculosis.[2]

SYMPTOMS: Enlarged glands, location and rate of growth. General symptoms of anemia. Hemorrhages. "Chronic relapsing fever." Mechanical effects. Circulatory and nervous symptoms. Gastro-intestinal disturbances. Cutaneous symptoms. Blood changes.

ADDISON'S DISEASE[3]

PATHOLOGY: Usual lesion of suprarenal bodies, gross and microscopic. Other morbid changes occasionally found. Abdominal sympathetic, changes in cells and fibers. Deposit of pigment.

1. Karsner: Archives of Internal Medicine, August, 1910.
2. Harris: California State Jour. of Medicine, March, 1909.
3. Progressive Medicine, June, 1911.

DIAGNOSIS: (1) Pigmentation of skin and mucous membranes, (2) anemia, (3) asthenia, (4) feeble heart's action, (5) gastric disorders.

Differentiate from pigmentation of: (1) abdominal growths, (2) hepatic disease, (3) pregnancy, (4) "vagabond's disease," (5) melanotic sarcoma, (6) exophthalmic goiter, (7) syphilitic discoloration.

Monthly Meeting

The Early Diagnosis of Exophthalmic Goiter.[1]

The Regeneration of Blood.[2]

The Clinical Diagnosis of the Leukemias.

Book Notices

WHERE IS THE TRUTH? A Review of "Patent Medicines," Prophylactic and Cosmetic Remedies Advertised in Newspapers and Pamphlets. By Dr. Sokoloff. Edition 3. Paper. 81 pp. Price, 75 kopecks. Published by the author, Dr. Sokoloff, Tchernishevsky per., dom. 20, Moscow, Russia.

The object of this book is to expose the dangers and harms of remedies advertised in the lay press. The Russian government decreed in 1907 that a "patent-medicine" vender must obtain a special permit for advertising his remedy and must give its composition and mode of preparation. Such action on the part of the government became urgent on account of the enormous number of fake remedies that appeared on the market during the two years after the official censorship of the press was abolished. The advertisements during these two years became so numerous, so fantastic and so impudent that it was necessary to put some restrictions not only on domestic, but also on imported "patent medicines." Thanks to the energetic action of the Russian government, the number of advertised "patent medicines" decreased considerably, because some were not allowed to be advertised at all, and in the case of those which were permitted the composition and method of preparation had to be given. It became thus possible to use the official data for explaining to the public the dangers and harm of the drugs. Sokoloff classifies the numerous morbid conditions for which cures were advertised as follows: (1) nervousness and general weakness: Spermin (Pöhl) and its imitations, Hartman's Cardialin, Phytin, Glycerophosphates, Sanatogen, Somatose, Hommel's Hæmatogen, Albukol and Pholaxfer; (2) obesity: Antipositin, Marconi's Powders, Marienbad Pills, Iodothyrin, Iodirin; (3) constipation: Cascarins (Leprince, Barber, Midy), Ara Pills (containing rhubarb, aloes, cardamon, sodium and magnesium sulphate), Regulin (cascara sagrada and agar-agar), Purgen (phenolphthalein), Scavulin (cascara, phenolphthalein and rhubarb), and Califig; (4) sexual impotence: electric belts, gold pastor apparatus, erectors, Muracetin, Amrita (contains quinin, iron and cantharidin); (5) pregnancy: preventive devices such as condoms, pessaries, sponges, etc.; (6) syphilis: (treatment of syphilis without mercury), Indian balsam; (7) gonorrhea: (injections of midi, matico); (8) skin diseases; (9) rheumatism, fakir's ring; (10) ear diseases, alcoholism, asthma, colds, etc.: bromids and sodium bicarbonate and milk sugar and numerous other remedies for piles, neuralgia (baume Bengué, consisting of menthol, methyl salicylate and lanolin).

In the second part, Sokoloff speaks of cosmetic remedies advertised in the newspapers, such as Odol (mouth-wash consisting of salol, alcohol, water, saccharin), remedies to promote hair growth (he explains the uselessness of such remedies), remedies for different diseases of the hair, for developing the breasts (for which Marbor Pills are recommended containing pyrophosphate of iron, sodium iodid, dextrin, nuts and extract of quassia with other indifferent drugs), for developing beautiful necks and full round shoulders (pills of iron and quinin, forming so-called Bella Forma Pills).

The subject is well covered. Some remedies, such as Pöhl's Spermin and cosmetic massage of the face, are discussed at length. Sokoloff always gives scientific reasons against the use of the various preparations discussed.

The book has had a tremendous success in Russia, the first edition being exhausted witnin one month after publication. The work of Dr. Sokoloff is similar to that of the Council on Pharmacy and Chemistry of the A. M. A., but it is rendered much easier by the energetic cooperation of the Russian government.

BEDRÄGLIGA LÄKEMEDEL OCH LÄKEMETODER. Jämte Redogörelse för Några I Värt Land Utbjudna Läkemedel. Nr. 1 af Småskrifterna Utgifvna Av Byrån För Upplysning om Läkemedelsannonser, Upsala, Sweden. Edition 4. Pp. 126. Paper. Price, 50 øre. Lund, Sweden: Gleerupska Univ.-Bokhandeln.

This is the first of a series of pamphlets published by the Central Bureau of Medical Advertising in Sweden. The author, Professor Thunberg of Lund, devotes some fifty pages to a plain talk to the public, attempting to prove, by a popular interpretation of certain physiologic and chemical phenomena, the absurdity of patent medicines and the ready-made diagnosis. He then exposes some 160 well-known frauds, among which the most successful seem to be American—the Kidd Dope, California Fig Syrup, Haig's Goiter Cure, and many others. The fact that American medicinal fakers have met such success in Sweden is not so strange when one considers that country's large contribution to American immigration and the glowing colors in which American civilization has been depicted in the letters sent home every year by the prosperous relatives in the New World. This must necessarily have a great influence on the minds of the Swedish public and it no doubt lends weight and distinction to everything American. Among information of especial interest in this pamphlet may be mentioned a report of the death of a child who accidentally swallowed two of Dr. Kidd's tablets; and also the mention of a homeopathic attack on the medical profession, in an open letter from a clergyman to the government, an episode that shows that our Swedish confrères also have their troubles. On the whole, however, this pamphlet gives one the impression that—in spite of all rustic ignorance and feudalistic legislation—the medical problems in Sweden are far less complicated than those in larger countries. The movement, of which this pamphlet is the first product, will surely eradicate the dope-evil, provided it follows the path pointed out by Professor Thunberg in this pamphlet, namely, popular education.

DISEASES OF THE EAR, NOSE AND THROAT. For the Family Physician and the Undergraduate Medical Student. By Henry Otridge Reik, M.D., Associate in Ophthalmology and Otology in the Johns Hopkins University. Assisted by A. J. Neilson Reik, M.D., Surgeon in the Baltimore Eye, Ear and Throat Hospital, Baltimore. Cloth Price, $3. Pp. 374, with 81 illustrations. New York: D. Appleton & Co., 1911.

This work is intended to meet the needs of the physician and the undergraduate student. The author recognizes the fact that it is essential that the general practitioner should have sufficient knowledge of the so-called special branches to enable him to make a diagnosis, to be able to treat the simpler affections of the special organs, to realize his limitations in these special fields and to know when to advise the assistance of a specialist. The author has solved this question, as far as suitable text on the ear, nose and throat is concerned, in this new work which should appeal to both student and physician, since it is eminently practical as a text-book for the former and a valuable reference work to the latter.

HYGIENE FOR NURSES. Theoretical and Practical. By Herbert W. G. Macleod, B.Sc., M.D., M.S. Edin. Cloth. Price, $1.50 net. Pp. 233, with 40 illustrations. New York: William Wood & Co., 1911.

This book is not likely to be of so much practical value to nurses on this side of the Atlantic as to those of Great Britain. The subjects of ventilation and sanitation are considered in relation to British houses which differ materially from American buildings in construction and heating arrangements. Excerpts from acts of parliament—"Infectious Diseases Prevention Act;" "Infectious Diseases Notification Act;" "Vaccination;" "Children's Act;" "Care of School Children;" "Midwives Act," etc.—make the book valuable as a reference work.

1. Mayo: Surgery, Gynecology and Obstetrics, August, 1910. Werelius: THE JOURNAL A. M. A., July 17, 1909. Jackson and Mead: Boston Med. and Surg. Jour., March 12, 1908; THE JOURNAL A. M. A., Oct. 12, 1907.

2. Morris: Archives of Internal Medicine, iii, 93.

Medicolegal

Annulment of Marriage for Alleged Misrepresentations as to Health Refused—Physician not Chargeable with Knowledge of Condition of Own Health

(Gumbiner vs. Gumbiner (N. Y.), 131 N. Y. S. 85)

A special term of the Supreme Court of New York, Kings County, in dismissing the plaintiff's complaint asking an annulment of her marriage with the defendant, says that over a year before the marriage she heard from a friend that the defendant had some pulmonary trouble. In September, 1904, she mentioned this to the defendant. She testified that he replied: "No; I had a cold. I have nothing the matter, with me. I am perfectly well." She also added: "At the time he looked well to me. He told me there was no such thing as pulmonary trouble; that he was well and in a fit condition to marry." His health continued apparently good, and fourteen months later, or Nov. 6, 1905, they were married by a civil ceremony. As the young husband could not then provide a home, his wife continued to live with her mother. In 1907, his prospects having improved, a further religious ceremony was solemnized, after which they lived together. The defendant was apparently outwardly in good health, and the married life was unclouded until August, 1910. He then had a cold, which grew into grippe, with pleurisy and fever, so that he had to go to the country for three months. It also transpired at the hearing, although it did not appear when the plaintiff learned thereof, that the defendant had a serious illness when a medical student in 1902. In that spring his sputum had blood, and an affection of the lungs was feared. No test was made for the distinctive bacilli of tuberculosis, but the physician sent him for two or three months to a sanitarium. Thence, in the fall of 1902, he went to Los Angeles for eighteen months, where he was much benefited. On his return to New York his symptoms had disappeared. Even six years after this alleged representation, and on his first illness after his marriage, when pleurisy had developed, the diagnosis of his condition was uncertain. About the end of November, 1910, a physician pronounced his ailment tuberculosis, but could not say with certainty if it was of long standing.

It was urged that the defendant, being a physician, was chargeable with knowledge of the true condition of his health. But, in view of his good health that, except for usual colds, appeared to have been uninterrupted for six years, how could scienter (knowledge) be found in 1904, and consequent concealment? Looked at on the narrow basis of a contract merely, the elements of fraud (which are never presumed) were not established. Matters of general bodily health and other qualities and circumstances as to the fortune and position of the intending parties do not go to the fundamental and essential elements of the marriage relation. In England hardly any fraud, however gross, can make voidable a marriage by persons who intelligently took part in the marriage ceremony. Although it is said that this state (New York) looks on marriage "in no other light than a civil contract," yet, even in a marriage like this, without issue, the public is concerned. Marriage obligations once entered on, and more solemnly repeated in a second ceremony, after full means of inquiry and with ample time for deliberation, are not lightly to be dissolved. The plaintiff had no actionable grievance in the husband's failing health, first manifested six years after the alleged representation of fitness to marry, and following on three years of actual consortium.

Privilege Waived by Bringing of Action for Malpractice—Evidence of Defense by Medical Society not Admissible

(Tercier vs. Dare (N. Y.), 131, N. Y. S. 51)

The Third Appellate Division of the Supreme Court of New York reverses a judgment recovered by the plaintiff for malpractice, and orders a new trial. The court says that the plaintiff fell from the steps of his house, and struck on his shoulder and was treated for the injury by the defendant. The plaintiff's evidence went to show that his shoulder was dislocated, and that he was not properly treated for a dislocation. The physician had treated him for a considerable time before the injury for a chronic infectious disease, and his theory was that the shoulder was not dislocated, but bruised, and that infection from the contagious disease attacked the shoulder joint following the bruise, and he treated him accordingly and informed him fully as to his condition. The plaintiff did not substantially deny taking the medicine prescribed for the chronic disease, or that the defendant informed him that his trouble was caused by such disease. The court thinks that the judgment in the plaintiff's favor was not fairly sustained by the evidence.

The court also thinks that a ruling was prejudicial and called for a reversal of the judgment, which excluded evidence as to the nature of the disease for which the defendant had previously treated the plaintiff as a privileged communication between patient and physician. It was evident that the defendant could not by experts show to what extent the plaintiff's condition might be due to a chronic disease unless he was able to show what that disease was. By bringing an action against his regular physician who had been treating him for a disease, claiming that the subsequent treatment was malpractice, the plaintiff waived the professional privilege, and the defendant was permitted to show any facts he knew bearing on the present condition of the plaintiff.

After suit brought, the defendant wrote a letter to the plaintiff, saying, in substance, among other things, that the medical society of the state defended its members in actions for alleged malpractice. This letter was offered in evidence and received over the defendant's objection and exception. Perhaps, standing alone, this erroneous ruling might not call for a reversal, but, as a new trial was to be had, the error would not occur again.

The reexamination with reference to the letter developed the fact that by reason of membership in the society the member was entitled to be defended by the attorney of the society in such actions, and to that extent the defendant was insured or indemnified. The letter was not evidence on any subject before the jury, and it could only tend to prejudice the defendant's case by making the jury believe that the medical society in some way must bear a part of the burden of the defense. Perhaps the jury reasoned that, if the defense cost the defendant nothing, its verdict against him would not be a very serious burden.

The court thinks that the familiar rule in negligence cases excluding evidence that the defendant is insured against liability applied in principle to this case. The letter could not be said to be an admission of the defendant's guilt, as the suit was already pending, but it was an unwise attempt by the defendant to frighten the plaintiff from further prosecuting the case, not by a false statement, but by a statement which as matter of fact rested on a substantial basis.

Gauze Alleged to Have Been Left in Abdomen

(Zilke vs. Johnson (N. D.), 132 N. W. R. 640)

The Supreme Court of North Dakota apparently reluctantly reverses a judgment recovered by the plaintiff for malpractice, and orders a new trial, on account of error in an instruction which in effect told the jury to disregard all statements made by counsel in argument. The allegations were that the defendant had negligently failed and refused to procure necessary professional assistance in performing an operation on the plaintiff in 1906, and had left some gauze in the wound, which remained there until removed by another operation, by others, in 1908.

The court holds that there was no merit in an assignment of error because the plaintiff had been permitted to show the pain suffered by her before establishing the acts of negligence charged, as that objection merely went to the order of proof, which is left to the discretion of the trial court. Nor was it error to permit the plaintiff, a married woman, to testify to her inability, after the operation, to perform her usual household work, it appearing that such testimony was offered merely to show the extent and character of her injuries, and not for the purpose of augmenting the damages on account

of loss of services. It was also proper to permit the plaintiff to show that she had unconditionally obligated herself to pay another physician and surgeon for performing the operation for the purpose of removing the gauze.

Testimony as to the reason the 1906 operation was performed at the plaintiff's home, instead of elsewhere, and the physician's knowledge that the surrounding conditions at that place were not the most favorable, was immaterial, as it had no tendency to throw any light on the issue of the defendant's alleged negligence in leaving the gauze in the plaintiff's abdomen, or on his alleged negligence in performing such operation without proper assistance. While the complaint charged, as one of the acts of negligence, that the defendant performed the operation without proper assistance, there was nothing to show that such alleged negligence in any manner directly contributed to the injury complained of, but it might be proper to show such fact as a circumstance of some evidentiary weight bearing on the particular negligent act relied on.

The defendant positively swore that at the 1906 operation he did not make an incision entirely through the abdominal wall, but merely penetrated "the aponeurosis of the recti muscles," and that the operation was outside of the peritoneal cavity, in which he was to some extent corroborated by the nurse. He also swore that at neither the 1906 operation nor one in 1905 did he use any packing, but used a dressing and sponging. The plaintiff conceded that there was no direct testimony showing that the defendant left the gauze in her abdomen at the 1906 operation, but contended that the circumstantial evidence was wellnigh conclusive that such was a fact. She also called attention to the fact that in the nature of the case direct proof could not be furnished. She was under the influence of an anesthetic at the time of such operation, and the only other persons present were the defendant, his wife and the nurse. The court holds that the evidence was sufficient to require its submission to a jury.

Society Proceedings

COMING MEETINGS

Missouri Valley Medical Society, Colfax Springs, Ia., Mar. 21-22.

PHILADELPHIA COUNTY MEDICAL SOCIETY

Meeting held Jan. 10, 1912

The President, DR. C. B. LONGENECKER, in the Chair

SYMPOSIUM ON CORRELATION OF SPECIAL DISEASES AND GENERAL SYSTEMIC AFFECTIONS

Certain Infections and Intoxications and Their Ocular Symptoms

DR. G. E. DE SCHWEINITZ: The various types of ocular disorders depend on diseases of nutrition, particularly those which have relationship to the various types of chronic rheumatism, ostitis deformans, arthritis deformans and gout. It is important to make a differential diagnosis and to recognize the value of bacterin in the treatment of gonorrheal inflammations of the uveal tract. In the case of the so-called intoxications which produce optic nerve diseases, especially the toxic amblyopias, the lesions depend not alone on the evil influence of the abuse, for example, of tobacco and alcohol, but on the effects of these drugs in creating chronic intestinal catarrh, which in turn is influential in fostering the optic nerve disease. I wish to emphasize the value of thorough analyses from the standpoint of physiologic chemistry, and of thorough study of the metabolism in determining the etiologic factors which are potent in bringing about certain relapsing and chronic uveal tract diseases which modern tests show are not due to the usual infections, namely, syphilis and tuberculosis. Analogous to this are the infections which pass through the tonsils and the pharyngeal ring, creating in distant portions of the body adenitis, arthritis and obscure abdominal affections. Similar infections pass through these areas and cause ocular diseases. In this connection we must recognize the importance of disease of the gums and caries of the teeth in their relation to eye affections. I wish to plead for a more thorough study, particularly of the relapsing uveal tract diseases and optic nerve affections. The duty of the doctor to his patient is not performed unless the same care in investigation is given to these ocular diseases as the internist gives to any obscure general condition, and we must insist on the necessity in any case of doubt, of calling in the aid of the internist, the rhinologist, the physiologic chemist or the dentist, as the case may require.

DISCUSSION

DR. AARON BRAV: There are certain cases of affections of the uveal tract in which we cannot find the cause even with repeated examinations. We have sometimes to rely on empirical treatment. The word "auto-intoxication" is not always wisely used. The conditions we ascribe to auto-intoxication are often pre-albuminuric in nature, and repeated urinary examinations are essential. If, on examination, we find albumin or casts and indican, we should think of nephritis. The therapeutic test is not always final. There are some diseases that follow a certain course, no matter what therapeutic agent is employed. They will proceed until the acme of the disease is reached and then decline without being influenced by any special remedy. We have sometimes cases of diabetes in which the only symptom is paralysis of the external ocular muscles. In a case at present under my care there is a total paralysis of the oculomotor nerve associated with paralysis of the abducens, there being no other symptoms, while the urine in repeated examinations showed a large amount of sugar.

DR. S. LEWIS ZIEGLER: These infections are not always of one specific character. I have seen a case of mixed infection, tuberculous and syphilitic, in which the lesion existed for nine months before yielding to tuberculin injections. We must not forget that there are perversions of metabolism localized in the internal secretions, that there are produced irritating substances which are distributed through the system. These conditions must be met and their proper treatment instituted.

Relation of Ear Diseases to Systemic Affections

DR. B. A. RANDALL: Ear diseases are common, constituting 2 per cent. or more of those met in general practice. More than half are chronic, yet the treatment is not in most cases beyond the powers of the family physician, nor do the results justify any pessimistic attitude. General disorders underlie a large proportion of these affections and must be treated as well as the local conditions; and their frequent relation to influenza and the exanthems must oftener be forestalled by hygiene, such as protective covering of the ears before they suffer involvement. Extreme deafness is often caused by meningitis, syphilis or toxemias. Arteriosclerosis, lithemia or auto-intoxications underlie many cases; and assumptions of heredity may only cloak imperfect study. Extensions from the ear cause many intracranial and septicemic disorders; the bronchopneumonias and bowel infections of children are often associated with or due to tympanic infections; and tuberculosis may have its primary focus, surgically removable, in the ear. Typhoid, diphtheritic and other germs have been found in the ear-discharges of even otherwise indeterminate cases and endanger the spread of these diseases, especially by the light cases. Forming 2 to 5 per cent. of mortality, ear-disease should receive 1 per cent. of the time of the medical curriculum—forty hours of the 4,000 as now allotted.

DISCUSSION

DR. JAMES H. MCKEE: The fact that the aurist sees so many of the chronic affections shows that many of the more acute cases have been unrecognized, untreated or mistreated. The pediatrician places grip as probably the most frequent cause of otitis media and next to this pneumonia. In many of the cases of epidemic influenza the pneumococcus is found in the discharge from the ear.

DR. HENRY W. CATTELL: I should like to ask Dr. Randall whether he has had any experience in deafness following the use of salvarsan. I should also like to ask whether along with

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bexamethylenamin he has used any of the vaccines for the treatment of ear lesions in which the streptococcus, pneumococcus and other organisms, which produce this condition, are to be found.

DR. B. A. RANDALL: I have so far not seen a case in which the use of salvarsan caused deafness. The syphilitic cases of the ear are very sad ones. They may yield nicely to treatment for a time, but all too soon they relapse and the outcome is very bad, generally from neglect of treatment. This is true of both inherited and acquired cases. As to mumps, we all know that cases of deafness follow this affection, but they can be counted on the fingers, even by men of large experience. I recall a girl of 16 whose nearly total deafness followed mumps and internal ear disease was found, but close scrutiny revealed syphilitic stigmata. Small-pox has given me very instances of otitis media. The vaccines, other than the tuberculous, I have not made much use of, and I am in doubt whether we shall get a polyvalent serum of much value. Thus far they have failed me entirely.

Current Medical Literature

AMERICAN

Titles marked with an asterisk (*) are abstracted below.

Annals of Surgery, Philadelphia

January, LV, No. 1, pp. 1-184

1 *Surgical Aspects of Membranous Pericolitis. L. S. Pilcher, Brooklyn.
2 *Surgical Treatment of Colitis. C. L. Gibson, New York.
3 *Surgical Treatment of Acute Pancreatitis. W. Körte, Berlin, Germany.
4 *Incision for Lumbar Exposure of Kidney. W. J. Mayo, Rochester, Minn.
5 *Epigastric Hernia, Cause of Chronic Diarrhea. F. Cobb, Boston.
6 *Sprain-Fracture. G. G. Ross and L. F. Stewart, Philadelphia.
7 *Dressing for Fracture of Clavicle. H. D. Collins, New York.
8 Fracture of Floor of Acetabulum. P. G. Skillern and H. K. Pancoast, Philadelphia.
9 Clamp for Lining Up Fractured Long Bones. W. Bartlett, St. Louis.
10 Fracture of Sesamoid Bones. G. P. Müller, Philadelphia.

1. **Membranous Pericolitis.**—As a result of personal observations, it has seemed to Pilcher that these right-sided pericolic adhesions and membraniform crippling veils and bands form a fairly distinct pathologic entity deserving of recognition as a well-defined surgical condition. In all cases they are a source of ill health and suffering. In some cases they are a positive menace to life. In most instances they can be relieved by procedures that are attended with a minimum of operative risk. He cites a number of cases.

2. **Surgical Treatment of Colitis.**—Gibson believes that there still remains some sphere of usefulness to the operation of valvular colostomy in these cases of colitis, although he thinks it is unwise, if not impossible, to attempt at present to formulate any indications for the employment of this measure. It is fair to say that certain forms of colitis can be cured by it. It may be objected that such cases are of the milder variety that would yield to the orthodox treatment. To Gibson it seems that the results have been more direct, progressive and prompt than are attained by the non-operative measures. With regard to the therapeutic agents that may prove of value Gibson relies principally on the mechanical cleansing by flushing the bowel with an appropriate bland solution, such as the normal saline, used as a continued irrigation, escaping through a rectal tube, or the colon may be filled to moderate distention, say three quarts, and subsequently evacuated. The frequency should be established by the tolerance of the bowel and the urgency of the symptoms. At the beginning, if well borne, Gibson prefers to repeat the irrigation at regular intervals of eight or twelve hours, possibly oftener. Agents destined to exert a direct influence on the ulcerating surfaces will naturally act better after the preliminary cleansing. They should be introduced separately from the saline, or after it has been evacuated. The bowel should be flushed with plain water prior to the use of substances such as silver nitrate, which combine with the saline. The required therapeutic agents will also vary somewhat with the nature of the colitis. The patient should be on an appropriate, chiefly protein, diet.

3. **Surgical Treatment of Acute Pancreatitis.**—The scope of Körte's paper is so far reaching and the material contained therein is so rich in valuable data that it is impossible to abstract it in the limited space at our disposal.

4. **Incision for Lumbar Exposure of Kidney.**—Beginning at a point 2 to 2½ inches lateral to the dorsal spines near the outer region of the erector spinæ muscle; Mayo makes a longitudinal incision 2 to 3 inches in length through the skin, superficial fascia and posterior layer of the lumbodorsal fascia (vertebral aponeurosis) which covers the erector spinæ muscle. The incision lies behind the twelfth rib from the angle, if present, nearly to the head, and reaches downward to a point ½ inch below the angle. From this point the incision passes obliquely downward and forward along the interior margin of the quadratus lumborum muscle to a point an inch above the crest of the ilium, and there turning runs forward parallel to the iliac crest as far as necessary. The posterior superior lumbar triangle (Kelly) just beneath the twelfth rib is then exposed by cutting an opening through the external and internal oblique, transversalis and latissimus dorsi muscles, exposing the transversalis fascia in its lumbar portion. This fascia is then opened freely, exposing the perirenal fat. The ilio-inguinal and iliohypogastric nerves are identified and retracted out of harm's way and the lower part of the incision completed. The twelfth rib is then cleared in its posterior portion upward and backward nearly to the articulation of the rib with the transverse process of the twelfth dorsal vertebra, and the pleura pushed upward. By retracting the erector spinæ muscle, on the one hand, and the costal margin, on the other, a wide exposure is accomplished at the point of previous inaccessibility. As a rule, the kidney can readily be drawn through the incision to the surface with but little traction. The incision is easily closed and there is little or no danger of hernia. The incision varies from the ordinary lumbar incision only in relation to the exposure above and behind the curve or angle of the posterior half of the twelfth rib. In operating on kidneys which are not greatly altered in size, or in which the alteration in size is due to fluid contents which can be evacuated, Mayo prefers the lumbar incision. For those tumors of the kidney which present themselves as a distinct abdominal mass the anterior transperitoneal incision is best.

5. **Epigastric Hernia.**—Cobb reports a case of chronic diarrhea yielding to no form of medical treatment, but cured by operation on an epigastric hernia.

6. **Sprain-Fracture.**—Of the 135 cases studied by Ross and Stewart, forty-six were in the ankle; twenty-five the wrist; twenty-five the elbow; twenty-three the shoulder; fifteen the knee; nine the hand; and two were in the anterior foot region. With the ankle and wrist cases the tarsal and carpal bones have been respectively included. Twenty-eight of the ankle fractures were of the malleoli, and of these twenty-four were of the external malleolus; being within one of the number of sprain-fractures found at the wrist and over 16 per cent. of this series. Thirty-three of these patients were old (aged 3 weeks or more). All of these patients suffered as a result of either being treated as a sprain or receiving no treatment. Most of these cases were caused by indirect violence; a few were caused by direct violence. In the experience of the writers it has been possible to diagnose clinically 77 per cent. of the sprain-fractures shown up by Roentgen-ray. Of the remaining 23 per cent., one was diagnosed osteoperiostitis, one luxation and the rest sprain, or contusion. In a small percentage of cases that the Roentgen-ray did not demonstrate to be sprain-fractures, the diagnosis of sprain-fracture was made. They hold that a history of sufficient injury, with a sharply localized area of swelling and acute tenderness over a region of ligamentous or tendinous attachment, means sprain-fracture, and that about 15 per cent. of all fractures are sprain-fractures. That condition, formerly called severe sprain, they term sprain-fracture, reserving the term strain for the condition resulting from stretching of soft parts. They believe that sprain-fracture is probably a part of the pathology of every dislocation and if in doubt as to whether or not sprain-fracture has occurred, they would treat it as a sprain-fracture.

7. **Dressing for Fracture of Clavicle.**—The material used by Collins consists of heavy moleskin adhesive plaster, which is nonirritating. The lines of force are the same as those of the Sayre dressing. A lacing joins this elbow piece with the shoulder cap in front and another is placed behind. The front and back lacings between the elbow sling and shoulder cap permit the injured shoulder to be raised or, by tightening one lacing more than the other, the elbow may be brought forward or back as desired.

Kentucky Medical Journal, Bowling Green

January 1, X, No. 1, pp. 1-55

11 *United We Stand, Divided We Fall. J. G. Carpenter, Stanford.
12 Practical Lessons from Eight Months' Operation of Our Vital Statistics Law. W. L. Heiser, Bowling Green.
13 Typhoid as Seen and Treated by Country Practitioner. V. A. Stilley, Benton.
14 Typhoid, Statistics and Prophylaxis. P. Hansen, Bowling Green.
15 Differential Diagnosis Between Glaucoma, Iritis and Conjunctivitis. H. G. Reynolds, Paducah.

11.—Abstracted in THE JOURNAL Nov. 18, 1911, p. 1719.

Journal of American Public Health Association, Columbus, O.

December, I, No. 12, pp. 869-948

16 *Counting Apparatus for Litmus Plates with Cold Counting Plate for Use with Gelatin Plates. S. H. Ayres, Washington, D. C.
17 Report of Minneapolis Vice Commission. G. F. Butler, Chicago.
18 Method Employed at New York Quarantine for Detection of Cholera Carriers. R. H. Creel, Ellis Island, N. Y.
19 *Decolorization Test for Detecting Cholera Carriers. A. J. Bendick, New York.
20 Modern Practice in Disposal of Refuse. R. Hering, New York.
21 Beriberi. M. G. Lebredo, Havana, Cuba.
22 *Liver Broth. D. D. Jackson and T. C. Muer, Brooklyn.
23 *Classification of B. Coli Group. D. D. Jackson, New York.

16. **Counting Apparatus for Litmus Plates.**—Ayres has designed a counting apparatus for the determination of acid-producing colonies on litmus plates. The apparatus consists of a wooden box 7 inches long, 7 inches wide and 6½ inches high. The top of the box is covered by a piece of ground glass over which is placed an ordinary square counting plate. The front of the box is open so as to admit light which is reflected to the counting plate on the top by means of a plane mirror placed in the box at an angle of 45 degrees. A shield of wood, 14 by 7 inches, is attached to the front of the box 1 inch below the top. This shield is to protect the eyes from the light which is used in conection with the apparatus. A laboratory electric arc lamp, gas lamps, or an acetylene gas bicycle lamp may be used. The ordinary incandescent electric lamp is of no value for use with this apparatus, since it gives a yellow instead of white light. A yellow light so changes the blue color of the plate that acid-producing colonies fail to show the red coloration. When this apparatus is in use, the counting plate is illuminated by a bright white light and on account of the ground glass no images are reflected from the mirror. The acid-producing colonies on the litmus plate, as it rests on the illuminated counting plate, show very distinctly in contrast to the dense blue. When differential counts are made, using litmus as an indicator, it has been found that when using the illuminated counting plate the acid-producing colonies are increased from 25 to 50 per cent.

19. **Detecting Cholera Carriers.**—Bendick adds saccharose and sodium carbonate to the Dunham's peptone solution until the medium is alkaline, phenolphthalein being added as an indicator. If a moderate number of cholera vibrios are introduced together with other organisms, the culture becomes decolorized after five to eight hours' incubation. The cholera vibrios ferment the saccharose, the acid produced unites with the sodium carbonate and the medium becomes neutral, hence the red color of the phenolphthalein disappears. As a minimal number of cholera organisms introduced with a maximal number of other organisms do not readily decolorize the culture, the cholera vibrios should be enriched by preliminary incubation in Dunham's peptone solution.

22. **Liver Broth.**—For those observers who desire to determine the presence of all gas-formers (fermenting dextrose) at 37 C., and *B. coli* to the highest degree to which it is actually present, the authors have devised a medium giving quicker and higher results than dextrose broth, even after rejuvenation in nutrient broth. Its composition is as follows:

	Gm.
Beef liver	500.0
Peptone	10.0
Dextrose	10.0
Potassium acid phosphate	1.0
Water	1000.0

The medium is prepared in the following manner: Chop 500 gm. of beef liver into small pieces and add 1,000 c.c. of distilled water. Boil slowly for two hours in a double boiler (starting cold), stirring it occasionally. Make up loss by evaporation and strain through a coarse wire strainer. To the filtrate add 10 gm. of peptone, 10 gm. of dextrose, and 1 gm. of potassium acid phosphate. After warming this mixture in a double boiler and stirring for a few minutes to dissolve the ingredients, titrate with $\frac{n}{20}$ sodium hydroxid, using phenolphthalein as an indicator, and neutralize with normal sodium hydroxid. Boil vigorously for thirty minutes in a double boiler, and five minutes over a free flame with constant stirring to prevent caramelization of the dextrose. Make up loss by evaporation and filter through cotton flannel and filter paper. Tube, and sterilize in an autoclave for fifteen minutes at 120 C. (15 lbs.). It is very important that liver broth should not be exposed to the high temperature attained in the autoclave any longer than fifteen minutes, as prolonged heating above the boiling point causes caramelization of the carbohydrates, rendering the medium less delicate for bacterial development. The addition of small pieces of liver tissue, which have been sterilized in the autoclave, improves the rejuvenating properties of the medium. They should be added to the tubes after sterilization.

23. **Classification of B. Coli Group.**—The fermentative reactions have been chosen by Jackson as a means of classification, not only because of the ease with which these organisms are thus separated from those of other groups, but because of the facility with which each variety may be separated from the others. He recognizes four species: *B. communior*, (Durham.); *B. communis*, (Escherich); *B. aerogenes*, (Escherich); *B. acidi-lactici*, (Hueppe). The first two species are separated from the second two by their gas production with dulcite and the first species of each of these two groups may be separated from the second by its gas production with saccharose. Each of these species may be separated into four possible varieties in accordance with their gas production with mannite and raffinose. Two varieties of the third and three of the first and fourth species are now known.

Ohio State Medical Journal, Columbus

January, VIII, No. 1, pp. 1-54

24 Relation Between General Arteriosclerosis and Increased Tension in Eyeball. W. H. Snyder, Toledo.
25 Roentgen-Ray Diagnosis of Carcinoma and Other Deforming Lesions of Stomach. S. Lange, Cincinnati.
26 Practicability of Freud's Psycho-Analytic Therapy in Treatment of Psychoneuroses. H. H. Drysdale, Cleveland.
27 Resection of Tarsal Cartilage and Retrotarsal Fold in Advanced Trachoma. J. H. Williams, Cincinnati.
28 Treatment of Diffuse Suppurative Peritonitis: Report of Cases. U. K. Essington, Newark.
29 Melanotic Sarcoma of Chorioid. F. W. Alter, Toledo.
30 Duties of State and Municipalities in Prevention of Infant Mortality. C. L. Patterson, Dayton.

Yale Medical Journal, New Haven, Conn.

December, XVIII, No. 4, pp. 153-292

31 *Clinical Manifestations of Tumor Metastases in Bones. G. Blumer, New Haven, Conn.
32 Lateral Sinus Thrombosis. W. E. McClennan.
33 Surgical Treatment of Goiter. J. B. Boucher, Hartford, Conn.
34 Importance of Early Operations for Tumors of Breast. G. N. Bell, Hartford, Conn.
35 Intestinal Obstruction, with Special Reference to Intussusception in Infants. O. O'Neil Willimantic.
36 Peritoneal Tuberculosis. D. Sullivan, New London.
37 Two-Stage Operation for Acute Intestinal Obstruction. E. R. Whittermore, New Haven.

31. **Tumor Metastases in Bones.**—There are certain types of malignant neoplasms that are especially liable to give rise to metastases in the bones. This is especially true of certain malignant tumors of the breast, the prostate, the adrenal, the kidney and the thyroid. The clinical picture produced by these metastases is very variable. They may simulate pri-

mary bone tumors and may be excised without the true primary growth having been discovered. They may cause fracture and be treated for fracture without a primary growth having been suspected. They may lead to lesions of the central nervous system, the true nature of which is overlooked. They are occasionally mistaken for aneurisms, especially when they involve the sternum or the cranium. Their recognition is important from a prognostic point of view, but mainly on account of its bearing on the desirability of radical surgical interference. Blumer emphasizes that a diagnosis of primary bone tumor should never be made without very careful examination of the abdomen, the mammary glands, the prostate and the thyroid. Any fracture of a long bone occurring as the result of trivial injury should suggest the possibility of bone metastases and lead to careful search for a primary new growth. In all cases of painful paraplegia or quadruplegia a malignant neoplasm should be suspected.

The bone metastases from cancer of the breast are in autopsied patients most frequent in the ribs, the vertebræ, the femur and the humerus. They are much less frequent in the cranium and face than is the case in the other forms of growth, especially the thyroid metastases. Of Leutzinger's cases with bone metastases 14.5 per cent. showed signs of spinal metastases, 7.6 per cent. of metastases in the extremities and only 2 per cent. of skull metastases. More modern collected statistics show 25 per cent. with vertebral involvement, 20 per cent. with metastases in the femur, and 18 per cent. with metastases in the ribs. The thyroid tumors which give rise to bone metastases present some very marked peculiarities. While some of them are very evidently malignant, judged from their clinical manifestations alone, others show none of the ordinary evidences of malignancy. An analysis of sixty-two cases from the literature shows that two-thirds of the thyroid metastases occur in women, and 90 per cent. of the cases between the ages of thirty and seventy. No obvious clinical involvement of the thyroid is present in at least 25 per cent. of the cases; when enlargement occurs it is often apparently an ordinary goiter which may have been present as long as thirty years before metastases appeared.

It is important to note that metastases may not appear until three or four years after the surgical removal of the gland. Clinically, two-thirds of the metastases are of the solitary type and even at post mortem multiple metastases are the exception. So far as distribution of the thyroid metastases is concerned, 38 per cent. of them occur in the bones of the cranium or face, 16 per cent. in the vertebræ, 10 per cent. in the femur, 9 per cent. in the pelvic bones, 7 per cent. in the sternum and 5 per cent. in the humerus. Spontaneous fractures occur in 9 per cent. of the cases and the spinal type in 10 per cent. The type of kidney tumor *par excellence* which tends to metastasize to bone is the so-called hypernephroma or Grawitz's tumor.

As regards the special peculiarities of their bone metastases Blumer has analyzed histories of forty-five cases. Sixty-two per cent. of these cases occurred in males. The bone tumors were clinically solitary in 51 per cent. of the cases and appeared most frequently less than a year after definite symptoms were apparent. Spontaneous fractures occurred in 24 per cent. of the cases and spinal symptoms in 13 per cent.; 20 per cent. of the metastases are in the femur and an equal number in the cranium or face, 17 per cent. of these being in the cranium. The vertebræ are involved in 14 per cent. of the cases, the ribs in 16 per cent., the humerus in 10 per cent., the tibia and pelvis in 4.3 per cent., the clavicle and the sternum in 2.9 per cent., and the scapula, hand and foot each in 1.4 per cent.

Journal of Tennessee State Medical Association, Nashville

January, IV, No. 9, pp. 343-389

38 Symptomless Gonorrhea in Women. H. L. Fancher, Chattanooga.
39 Treatment of Congenital Talipes in Infants. R. W. Billington, Nashville.
40 Syphilitic Indurating Edema, Report of Case. C. F. Anderson, Nashville.
41 Diet in Typhoid. K. S. Howlett, Franklin.
42 Treatment of Chronic Alcoholism. G. E. Pettey, Memphis.
43 Psychoses of Alcoholism. J. P. Schell, Nashville.
44 Some Eponymic Diseases. W. B. St. John, Bristol.
45 Chronic Indigestion. L. E. Burch, Nashville.

Journal of Pharmacology and Experimental Therapeutics, Baltimore

January, III, No. 3, pp. 295-377

46 Physiologic Action of Cytisin, Active Alkaloid of Laburnum (Cytisus Laburnum). H. H. Dale and P. P. Laidlaw, Herne Hill, London.
47 Influence of Sodium Iodoxybenzoate and Sodium Cyanid on Allergic Reaction of Inflammatory Character. S. Amberg and J. H. M. Knox, Baltimore.
48 *Alcohol and Caffein: Study of Antagonism and Synergism. J. D. Pilcher, Cleveland.
49 *Physiologic Studies in Anaphylaxis. W. H. Schultz, Independence, Mo.
50 *Two Crystalline Pharmacologic Agents Obtained from Tropical Toad, Bufo Agua. J. J. Abel and D. I. Macht, Baltimore.

48. **Alcohol and Caffein.**—Alcohol produces narcosis, varying from sleepiness with small doses, to light coma from moderate and deep coma with large doses. Caffein in non-fatal doses produces wakefulness and increased irritability; fatal doses more or less excitement. The alcohol narcosis is lessened somewhat when small or moderate doses of alcohol are combined with small or moderate doses of caffein (antagonism by algebraic summation of action); intensified when moderate doses of alcohol are combined with large doses of caffein; or large doses of alcohol with caffein in all doses (synergism by reversal of caffein action). Alcohol depresses reflexes and incoordination, increasing with the dose; the reflexes are abolished by large doses. Caffein exaggerates reflexes, increasing with the dose. Convulsions are only produced by fatal doses of caffein. They are not prevented by moderate doses of alcohol. The two drugs are always synergistic and the fatality is greater than simple summation. Death results by combining "small" doses of alcohol with "large" doses of caffein and "moderate" doses of caffein with "moderate" doses of alcohol, but not by combining "small" doses of caffein with "large" doses of alcohol. In other words, the synergism is one-sided, alcohol increasing the toxicity of caffein, while caffein does not increase the toxicity of alcohol. The death is always cardiac, suggesting that alcohol renders the heart more susceptible to caffein poisoning (one-sided synergism by increased susceptibility). With fatal doses of alcohol caffein acts only deleteriously; with half fatal doses, moderate doses of caffein may decrease the narcosis and hasten recovery; large doses are dangerous. With small doses of caffein, alcohol lessens the psychic effects; with large doses, alcohol adds to the danger. The danger of cardiac death is increased by agents which alone have relatively little direct depressant effect on the heart. This would engender caution in the use of caffein in heart disease.

49. **Physiologic Studies in Anaphylaxis.**—The most important facts ascertained by Schultz are as follows: (1) Horse serum causes constriction of the pulmonary arteries, coronary arteries, and of the systemic arteries, and also acts directly on the heart-muscle. (2) In both normal cats and in cats sensitized with horse serum there is a fall of blood-pressure, following an intravenous injection of 0.0010 to 0.0025 c.c. of horse serum per gram body weight. (3) The action of the serum is peripheral, since destruction of the brain and spinal cord does not materially alter the end results. Furthermore, perfusion studies as well as other studies with excised organs yield results that show smooth muscle and cardiac muscle to be the most important tissues involved in causing the gross symptoms of anaphylactic shock observed in the cat and dog. (4) The abdominal blood-vessels play at best only a secondary part in causing the low blood-pressure since a fall of blood-pressure is obtained when all abdominal vessels are clamped off. (5) Atropin sulphate may or may not influence the circulatory phenomena. It is only very large doses of atropin that seem to have any influence on the action of serum when the protein is intravenously injected in doses of 0.0010 to 0.0025 c.c. per gram body weight. (6) Horse serum kills cats by its action on the cardiopulmonary system and not by vasodilatation of the systemic blood-vessels alone, the distention of the large abdominal and thoracic veins being for the most part passive. The rate of injecting the serum into the jugular vein, as well as the total amount injected at once, greatly influences the blood-pressure and cardiac phenomena, large doses rapidly injected being more certainly fatal.

50. **Crystalline Principles from Bufo Agua.**—From the secretion of the parotid glands of the tropical toad, *Bufo agua*, the authors have isolated two distinct, physiologically active crystallin principles. It was shown by chemical reactions and by analyses, by polarimetric observations and by qualitative and quantitative physiologic experiments that one of these substances is identical with dihydroxy-methyl-amino-ethylol-benzene (epinephrin, adrenalin, suprarenin). It is calculated that the crude venom contains nearly 7 per cent. (6.72 per cent.) of this amino-alcohol. By means of chemical reactions and analyses it has been shown that the venom also contains a crystallin principle which the authors have named bufagin. Bufagin is dextrorotatory (+ 11°), "neutral" in character, slightly soluble in water and readily soluble in a number of organic solvents. Its melting point is 217-218 C. Its elementary composition and molecular weight are represented by the formula $C_{26}H_{34}O_6$. Its behavior toward bromin shows that it does not contain an unsaturated carbon linkage of cholesterin. The marked action of bufagin on the heart, cardio-inhibitory center and musculature of the blood-vessels leads them to class this drug with the most efficient members of the digitalis series. Its action on the heart muscle is especially noteworthy. It increases its tonicity the strength of its contractions and the ventricular volume output. Small doses of the drug cause a marked diuresis. Bufagin does not appear to have a cumulative action and it may be administered hypodermically. The toad, *Bufo agua*, is not at all immune to dihydroxy-methyl-amino-ethylol-benzene, but is relatively immune to bufagin. The pharmacologic properties of bufagin, its chemical purity and the consequent ease with which it lends itself to exact dosage are facts that urge a trial of this substance in therapeutics. The successful use of toad skins in the medicine of an earlier day also lends support to the suggestion.

Northwest Medicine, Seattle, Wash.

January, IV, No. 1, pp. 1-34

51 Some Problems of Medical Profession. F. W. Taylor, Provo, Utah.
52 Congenital Stenosis of Pylorus. R. C. Smedley, Salt Lake City, Utah.
53 Surgical Treatment of Congenital Hypertrophic Stenosis of Pylorus. R. T. Richards, Salt Lake City, Utah.
54 Gastric Ulcer from Surgical Standpoint. E. F. Tucker, Portland, Ore.
55 Diabetes Mellitus in Childhood. W. Gellhorn, Seattle, Wash.

Journal of Kansas Medical Society, Kansas City

January, XII, No. 1, pp. 1-40

56 Open Perineal Prostatectomy. J. T. Axtell, Newton.
57 Lane Operation for Cleft Palate. M. T. Sudler, Lawrence.
58 Contract Practice. J. N. Davis, Independence.
59 Significance of Early Diagnosis of Uterine Cancer. E. F. Day, Arkansas City.
60 Serotherapy. H. G. Shelly, Mulvane.
61 Blastomycosis. C. W. Longenecker, Kingman.

Lancet-Clinic, Cincinnati

January 27, CVII, No. 4, pp. 77-110

62 *Action of Some Heart Stimulants. F. C. Askenstedt, Louisville, Ky.
63 *Unique Biliary Fistula, Absence of Common Duct and Gall-Bladder. J. F. Baldwin, Columbus, Ohio.
64 *New Method of Separating Saccharose from Dextrose, Pentose, Levulose, Lactose, Maltose and Invertin when Present in Urine, Saliva or Other Body Fluids. L. K. Hirschberg, Baltimore.
65 John L. Richmond, Western Pioneer Surgeon. O. Juettner, Cincinnati.

February 3, CVII, No. 5, pp. 111-142

66 Pathology of Cholecystitis and Its Complications. H. M. Richter, Chicago.
67 Symptomatology and Diagnosis of Toxic (Non-Infectious) Cholecystitis. B. Holmes, Chicago.
68 Medical Treatment of Cholecystitis. W. Engelbach, St. Louis.
69 Surgical Treatment of Cholecystitis. L. Frank, Louisville, Ky.
70 Anteantiseptic Ovariotomy. A. G. Drury, Cincinnati.

62. **Action of Some Heart Stimulants.**—The power of strychnin, atropin and digitalis to contract blood-vessels and increase the blood-pressure, commonly observed in experiments on animals, was not manifest in any of the cases in which Askenstedt made use of these drugs. The absence of increased blood-pressure after the clinical use of these remedies has also been noticed by other observers, and it has been thought that the increased heart action caused a corresponding relaxation of the arteries through vasomotor inhibition, thereby maintaining a vasomotor balance. If this hypothesis be true and the vasomotor action of, for example, strychnin is inhibited by the greater blood-supply to the vasomotor centers as a result of improved heart action, then, he says, an accidental reduction of the blood-pressure below the vasomotor balance would prove the most favorable condition for observing the constrictive action of a remedy on the blood-vessels. The action of a vasodilator as nitroglycerin would therefore be actively antagonized by the tonic effect of a vasoconstrictor until the vasomotor equilibrium is reached.

To put the vasomotor tonic action of strychnin to a test, strychnin and nitroglycerin were employed in such a way as to compare their combined action with that of nitroglycerin alone. Strychnin, gr. 1-30, was given by hypodermic injection in each case and thirty-seven minutes later in one case and one hour and three minutes later in the other, 1-50 gr. nitroglycerin was administered. On the following day 1-50 gr. nitroglycerin was used alone in each case and a comparison of the combined action of the drugs with that of nitroglycerin alone showed that the loss of tension was as great when strychnin and nitroglycerin were combined as when nitroglycerin alone was used. But the failure of strychnin, atropin and digitalis in this series of experiments to raise the blood-pressure, where by disease it had been reduced, is worthy of notice.

63. **Unique Biliary Fistula.**—The post-mortem in Baldwin's case showed that there had been an abscess, starting probably in the gall-gladder, but which had involved that entire region and which had resulted in the complete destruction of the gall-bladder and of the common duct. Not a trace of either of these organs could be found. The abscess had then burrowed to the right around the edge of the liver and in this way reached its upper surface, after which it penetrated the diaphragm and discharged through the lung. There had been no abscess of the substance of the liver.

64. **Separating Saccharose from Dextrose, Pentose, etc.**—Hirshberg places the suspected liquid, if sterile, in an incubator for twenty-four hours, or, if in a hurry or fearing bacterial fecundity or other contaminations boils the secretion for forty-five minutes with equal quantities of decinormal solution of sodium hydroxid. Dilute solutions of sodium hydroxid easily affect dextrose, mannite, maltose, mannose, lactose, levulose, galactose, or invert sugar; complete decomposition occurs. Saccharose is absolutely unaffected; it remains perfectly aggregated in its original molecules and may then be detected easily by the polariscope.

New Orleans Medical and Surgical Journal

January, 64, No. 7, pp. 491-568

71 Treatment of Hypospadias. F. W. Parham, New Orleans.
72 Arteriosclerosis. J. B. Elliott, New Orleans.
73 Splanchnoptosis. A. Eustis, New Orleans.
74 Origin of Torticollis: Case Showing Professional Dyskinesia. T. A. Williams, Washington, D. C.

Western Medical Review, Omaha, Neb.

January, XVII, No. 1, pp. 1-56

75 Operation in Acute Mastoiditis. D. C. Bryant, Omaha.
76 Acute Head Injuries, with Special Reference to Nervous Symptoms. F. E. Coulter, Omaha.
77 Hospital and Home Care of Sick. H. W. Orr, Lincoln.
78 Pyloric Obstruction Due to Gall-Stones. F. A. Brewster, Beaver City, Neb.
79 American Work in Surgery and Medicine. M. Strong, Omaha.
80 System in Diagnosis and Treatment. C. E. Remy, Omaha.

Bulletin of Lying-In Hospital of City of New York

June, VIII, No. 1, pp. 1-44

81 *Cesarean Section. A. B. Davis, New York.
82 *Case of Interstitial Pregnancy. J. W. Markoe, New York.
83 *Bacteriology of Puerperal Infection. W. L. McFarland, New York.
84 Work of Babies' Class During Year Ending Oct. 1, 1911. E. L. Coolidge, New York.
85 Medical Statistics, Lying-In Hospital, 1911. R. McPherson, New York.

81. **Cesarean Section.**—The total number of women delivered in the combined indoor and outdoor services of the Lying-In Hospital of the City of New York from Jan. 18, 1890, to July 28, 1911, totals 72,832. In this number Cesarean section was performed 298 times, or once in 244.40 cases. Of these mothers 264 recovered and thirty-four died. Of the

total number of children delivered by Cesarean section twenty-six died and nineteen were still-born. Davis has performed up to July 28, 1911, 104 Cesarean operations on eighty-nine women, of whom fifteen died, a maternal mortality of 16.83 per cent. If the mortality is based on the number of operations it is 14.43 per cent. In this series of cases twins were delivered twice, making a total of 106 in the number of children. Of this number seven (6.6 per cent.) were still-born, and twelve (11.11 per cent.) subsequently died in the hospital. The presentations were as follows: Ninety-six vertex, eight breech and two face. The infant mortality in the series was 17.92 per cent. (including still-births). Still-births resulted in six cases, one of which was a twin pregnancy, making a total of seven children.

82. **Interstitial Pregnancy.**—Five years ago Markoe's patient was admitted to the hospital for what was believed to be an incomplete abortion. A curettage was done but no fetus discovered. After remaining in the wards for some time she left against advice but returned in a few days in a condition of marked collapse with rapid pulse and high fever. At the time a diagnosis of ruptured ectopic gestation was made and it was believed that this had become infected because of the result of some latent tubal disease. At the time of admission the patient's condition was so bad that it was not deemed advisable to operate. The patient gradually improved under conservative treatment. Sept. 28, 1911, the woman again applied for treatment. She stated that three years ago she was delivered with instruments of a very large child at term which was still-born. Temperature and pulse were normal, likewise the blood-count. The urine showed a faint trace of albumin with acetone and diacetic acid present but no casts. The vaginal examination disclosed a slighty bloody discharge containing some pus. A bi-manual examination showed a tumor about the size of a goose egg on the right side of the uterus and apparently connected with it. This mass was extremely tender and slightly movable. According to the patient's statement her last menstruation had taken place on July 10, 1911, so that a provisional diagnosis of a two months ectopic gestation was made. A partial hysterectomy was easily acomplished. In reviewing this case, Markoe says it would seem that the patient's illness five years previously was most likely a ruptured ectopic pregnancy on the left side in which the hemorrhage was not very marked and where the products of conception were eventually absorbed, leaving behind the dense adhesions which were found at the last operation. The fact that during the interval an intrauterine pregnancy had occurred, is of interest and showed that the conditions which prevailed to bring about the two ectopic gestations did not prevent one ovum from lodging in the normal mucous membrane of the uterine cavity.

83. **Bacteriology of Puerperal Infection.**—The present article affords a brief review of the literature on puerperal infection. Later articles will include discussions of culture media and methods of making cultures, reports of bacteriologic findings, analyses of results and such experimental work as is considered of sufficient value for publication.

Journal of Iowa State Medical Society, Clinton

January 1, No. 7, pp. 341-396

86 Materia Medica and Therapeutics. F. Hornibrook, Cherokee.
87 Is Council on Pharmacy and Chemistry of American Medical Association Proving Its Worth to Medical Profession? C. S. Chase, Iowa City.
88 Surgery of Thyroid. Van B. Knott, Sioux City.
89 Disloyalty to Medical Ethics Responsible for Small Societies. P. R. Wood, Marshalltown.
90 Recent Burlington Epidemic. C. Stutsman, Burlington.
91 Tuberculosis Treated with Carl Spengler's Tuberculosis Immune Blood. G. N. Ryan, Des Moines.

Boston Medical and Surgical Journal

February 1, CLXVI, No. 5, pp. 155-194

92 Diagnosis of Diseases of Stomach and Intestines by Roentgen Ray. E. A. Codman, Boston.
93 Past and Present Methods in Practice of Medicine. A. Worcester, Waltham, Mass.
94 *Blood-Pressure in Toxemias of Pregnancy. R. M. Green, Boston.
95 Infiltration Anesthesia in Submucous Resection of Nasal Septum. I. Sobotky, Boston.
96 Cases from Skin Department of Massachusetts General Hospital. J. H. Blaisdell, Boston.
97 Case of Myiasis. H. B. Heart, East Dennis, Mass.

94. **Blood-Pressure in Toxemias of Pregnancy.**—To the twenty cases previously reported Green adds six. He cites one case to show the value of the ammonia coefficient as a diagnostic and therapeutic indication in that form of toxemia of pregnancy which is characterized by pernicious uncontrollable vomiting in the early months of pregnancy. That this is a true toxemia is, he says, evidenced by the pathologic changes found in the liver of cases which have come to autopsy and by the disturbance of metabolism indicated by the change in the normal relations of ammonia to urea nitrogen. Blood-pressure in this type is of little value and significance, though in the illustrative case it rose slightly in the final stage of the disease. The coefficient of ammonia, however, seems to have been of some importance as an indication, since it rose and remained at a definitely higher level during the more severe stage. To the groups recorded in the first paper, Green adds two more. 1. Post-partum eclampsia, which is a condition of cumulative toxemia in which the resistance of the patient's central nervous system prevents outbreak of symptoms till after labor. 2. Cases of pernicious vomiting, with fairly normal blood-pressure, in which the condition progresses to a fatal result, with rising ammonia coefficient, unless the uterus is emptied.

Medical Record, New York

February 3, LXXXI, No. 5, pp. 201-250

98 Importance and Prevalence of Occupational Diseases. W. G. Thompson, New York.
99 State Control of Occupational Diseases. L. W. Hatch, Albany, N. Y.
100 Occupational Diseases Due to Use of Metallic Poisons and Measures Needed for Their Prevention. M. A. Starr, New York.
101 Occupational Diseases of Skin. J. A. Fordyce, New York.
102 *Salvarsan in Syphilis of Nervous System. B. Sachs and I. Strauss, New York.
103 Syphilis. E. H. Griffin, New York.
104 Sexual Neurasthenia and Prostate. G. F. Lydston Chicago.
105 Blood-Pressure and Patient. W. H. Sheldon, New York.

102. **Salvarsan in Syphilis of Nervous System.**—The authors maintain that salvarsan has no curative effect in tabes and general paresis; that it seems to influence favorably some of the symptoms, particularly the vesical and sexual functions, and that under its use some of their cases remained stationary, and that none of them exhibited any unfavorable symptoms attributable to the drug itself; that in these two diseases it accomplishes as much as, but not any more than, was achieved in former years by the use of mercurials. In brain and spinal-cord syphilis the administration of salvarsan is followed by improvement in many of the symptoms, and it seems to accomplish at least as much as mercury did in these diseases. In the acute and subacute forms of brain syphilis, particularly in those associated with convulsive seizures and with chronic headaches, the drug has exercised a distinctly beneficial influence. There is no doubt, however, that the good effect of this treatment may be made more lasting by the additional use of mercury and the iodids. In spite of these rather negative impressions, the authors do not lose sight of the fact that the drug may prove most efficient in the prevention of parasyphilitic and metasyphilitic diseases of the nervous system. General paresis, and probably tabes, run a more slowly progressive course, and, on the whole, a milder course than they did in former years.

Journal of Medical Association of Georgia, Augusta

January, 1, No. 6, pp. 197-239

106 Therapy of Pulmonary Tuberculosis. L. C. Roughlin, Atlanta.
107 Plea for Isolation of Criminal Insane. W. A. Ellison, Milledgeville.
108 Fifty-Seven Consecutive Operations for Fibroid Tumors of Uterus. E. G. Jones, Atlanta.
109 Business Affairs of Physician. L. C. Allen, Hoschton.
110 Osteosarcoma of Pelvis. S. T. Barnett, Atlanta.
111 What Has Been Done in Georgia in Fight Against Uncinariasis. A. G. Fort, Atlanta.
112 Diphtheria. D. Williams, Folkston.

New Mexico Medical Journal, Las Cruces

January, VII, No. 4, pp. 107-142

113 First Treatment of Open Wounds by Surgeon; Its Influence on After-Treatment and Recovery. C. P. Brown, El Paso, Texas.
114 Tonsils. E. R. Carpenter, El Paso, Texas.
115 Gonorrhea in Female. E. Fisher-Frisbie, Albuquerque.
116 Gastric Ulcer. E. C. Prentiss, El Paso, Texas.
117 Conservative Surgery. J. Vance, El Paso, Texas.

Journal-Lancet, Minneapolis

January 15, XXXII, No. 2, pp. 29-56

118 *Carcinoma of Alimentary Tract. E. H. Beckman, Rochester, Minn.
119 Esophageal Obstructions, with Special Reference to Carcinoma. H. S. Plummer, Rochester, Minn.
120 *Carcinoma of Gastro-Intestinal Tract. W. J. Mayo, Rochester, Minn.
121 New Public Health. H. W. Hill, Minneapolis.
122 Routine Examinations of Gastro-Intestinal Tract. T. W. Stumm, St. Paul.

118 and 120. Abstracted in THE JOURNAL, Nov. 18, 1911, p. 1717.

Ophthalmology, Seattle, Wash.

January, VIII, No. 2, pp. 153-302

123 Ocular Leprosy. F. M. Fernandez, Havana, Cuba.
124 Use of Radium in Ophthalmology. G. S. Ryerson, Toronto.
125 Intestinal Sepsis in Ocular Affections. S. D. Risley, Philadelphia.
126 Crystalline Lens as Figured in Text-Books and as Seen in Eye. L. Howe, Buffalo.
127 Bilateral Papilledema with Central Scotoma from Sinusitis. F. J. Parker, New York.
128 Acute Plastic Iritis Markedly Benefited by Antistreptococcus Serum. A. A. Bradburne, Manchester, England.
129 Ocular Complications in Case of Impetigo Contagiosa. H. F. Hansell, Philadelphia.
130 Thrombosis of Cavernous Sinus, with Report of Case. H. H. Martin, Savannah, Ga.
131 Eye-Strain Among Public School Children. E. Bates, Ogden, Utah.
132 Iridectomy and Sclerotomy in Glaucoma. C. Abadie, Paris.
133 Idem. F. Lagrange, Bordeaux.
134 Medical and Surgical Treatment of Trachoma. Jacovides, Alexandria.
135 Sliding Flap in Cataract Operations (Van Lint's Method). L. W. Fox, Philadelphia.

American Journal of Urology, New York

January, VIII, No. 1, pp. 1-58

136 Common Sources of Error in Diagnosis of Renal and Ureteral Calculus. H. Cabot, Boston.
137 Posterior Urethra with Cysto-Urethroscope. L. Buerger, New York.
138 Tumors of Bladder. C. M. Harpster, Toledo, Ohio.
139 Phosphaturia and Oxaluria. F. E. Sondern, New York.
140 Cause of Hypertrophied Prostate. F. R. Charlton, Indianapolis, Ind.
141 Foreign Body (Cork) in Bladder. D. A. Sinclair, New York.

Long Island Medical Journal, Brooklyn

January, VI, No. 1, pp. 1-40

142 Dishonest Claims and Medical Testimony in Suits for Damages. C. A. Palmer, Brooklyn.
143 Uterine Deviations; Their Influence on Uterus and Their Correction. G. K. Dickinson, Jersey City, N. J.
144 Postoperative Mechanical Obstruction of Bowel Occurring Shortly After Operative Procedure. A. M. Judd, Brooklyn.
145 Tribute to Sewell Matheson. R. E. Coughlin, Brooklyn.

Journal of Ophthalmology and Oto-Laryngology, Chicago

January, VI, No. 1, pp. 1-34

146 Civic Medical Inspection of School Children, with Special Reference to Diseases of Eye, Ear and Throat. S. C. Ayres, Cincinnati.
147 Some Mastoid Experiences. C. M. Miller, Richmond, Va.

FOREIGN

Titles marked with an asterisk (*) are abstracted below. Clinical lectures, single case reports and trials of new drugs and artificial foods are omitted unless of exceptional general interest.

British Medical Journal, London

January 20, 1, No. 2664, pp. 113-168

1 Operative Cure of Ascites Due to Liver Cirrhosis. R. Morison.
2 *Recent Methods for Radical Cure of Hernia. H. H. B. Macleod.
3 *Case of Perforated Peptic Ulcer of Esophagus Complicated by Pyopneumothorax. J. Miller.
4 *Case of Typhoid Complicated with Cholecystitis. J. McMillan.
5 Case of Fibromyoma of Stomach. D. G. Cheyne.
6 *Method of Treating Damaged Intestine Without Resection. H. B. Angus.
7 *Solid Carbon Dioxid in Treatment of Hemorrhoids. H. G. Anderson.
8 Case of Ruptured Liver and Right Kidney: Operation: Recovery. G. R. Girdlestone.
9 *Acetyl-Salicylic Acid in Typhoid. G. Chambers.
10 Passage of Cast of Bladder per Urethram. J. M. Barlet.
11 Correction of Errors of Refraction for Microscope Work. W. B. Leishman.

2. **Radical Cure of Hernia.**—The most suitable cases for his omentopexy, Morison says, are those of alcoholic cirrhosis in patients otherwise sound and whom repeated tapping has failed to cure. None of these cases have, in his experience, been failures. The reason probably is similar to that of the cure of dropsy from heart failure following persistent overstrain. In both, the chief predisposing cause of the dropsy can be removed, in the case of the heart by rest, in the case of the liver by abstinence from alcohol. This explanation seems probable, because, though Morison has operated patients in good condition with ascites due to syphilitic cirrhosis, none of them have been cured. The most unfavorable cases are those which at their commencement simulate an abdominal emergency and suffer from pain and tense tympanites preceding the development of ascites. Except for the fact that Morison now makes the abdominal incision above the umbilicus to avoid the development of a ventral hernia, the operation is the same as that he originally suggested.

3. **Perforated Peptic Ulcer of Esophagus.**—The most typical and constant symptoms of this condition are: Pain, which is severe and comes on immediately after food, the site of the pain being at the lower end of the sternum and a little to the left of it. Pain is also felt between the shoulders. Vomiting is the next most constant symptom. Dysphagia is present in more than half the cases. It is due to reflex spasm of the muscle of the esophagus from pain, and it is the main diagnostic point between the condition and gastric ulcer. Hematemesis is also a very common symptom. Perforation has occurred in eight cases, thrice into the right pleural cavity, once into the left (author's case), once into both (in each case with pneumothorax), one each into the aorta, pericardium, and lesser omental sac. The ulcer is usually single. It may extend into the stomach and independent ulcers may occur in the stomach or duodenum (author's case). The situation is usually close to the cardiac orifice and the right posterolateral wall appears to be the commonest site. The condition is usually found in middle life. As regards sex, of forty-five cases in which the sex was specified thirty-one were males and fourteen females. Miller's patient had an ulcer of the lower part of the esophagus perforating into the left mediastinum and left pleura; pyoneumothorax; old tubercle at both apices; chronic ulcer of duodenum; recent fibrinous pericarditis; cloudy swelling of organs.

4. **Typhoid Complicated With Cholecystitis.**—The more important points in McMillan's case were: The presence of almost continuous constipation throughout the whole course of an ordinary typhoid illness; the development of inflammation of the gall-bladder during convalescence, about the eighth week of illness; the development of peritonitis in connection therewith, forming adhesions between the gall-bladder and the colon; the presence of *Bacillus typhosus* in pure culture, and the presence of a few gall-stones, consisting of cholesterin and mucin.

6. **Treatment of Damaged Intestine.**—The following has been found useful by Angus in many cases in which resection appeared to be the only resource, but the patient was old and feeble, exhausted, or suffering from severe shock. Where there is a perforation—for example, from a bullet wound—a suture or two of chromicized catgut passing through all the coats approximates the edges of the rent; then with Pagenstecher's thread the adjacent sides of the damaged area of intestine are brought together by means of Lembert suture, either continuous or interrupted, thus enclosing the weak spot. At first sight it appears as though obstruction would result from the kinking of the bowel, but this complication has not ensued after repeated trials.

7. **Treatment of Hemorrhoids.**—This treatment by means of solid CO_2, Anderson says is only suitable for small, uncomplicated internal hemorrhoids. It is only a remedy to be applied in selected cases.

9. **Acetyl-Salicylic Acid in Typhoid.**—Chambers endorses the use of acetyl-salicylic acid in small doses, 3 to 5 grains every four hours, combined with tepid or hot sponging, in typhoid as an effective means of lowering the temperature. The exhibition of the drug in this dosage to typhoid patients does not alter the blood-pressure or produce any appreciable ill effects. The skin remains moist, and in some cases there is profuse sweating. The greatest effect on the temperature is obtained by sponging the patient about half an hour after the administration of a dose of the drug, in this way combining the antipyretic actions of the medicinal and hydrotherapeutic agents. Chambers has been especially impressed with the marked diaphoretic and antipyretic actions of the drug. Three grains every four hours had frequently considerable effect and

in most cases 5 grains at the same periods produced profuse diaphoresis. In only one case was he compelled to increase the dose above 5 grains. In two cases 5 grains every four hours appeared almost too active, as the temperature charts showed a fall in temperature of 9 and 10 degrees, respectively, during the exhibition of the drug; there was no untoward effect during the fall of the temperature. In giving acetyl-salicylic acid to typhoid patients, it is desirable, therefore, to commence with a dosage of 3 grains every four hours; if this should not be sufficient, the quantity should be gradually increased until the desired effect has been obtained. Chambers suggests as the reason why acetyl-salicylic acid is more effective as an antipyretic in typhoid than in most other fevers, that probably the fever of typhoid is frequently labile in character. This theory also affords an explanation of the undoubted value of hydrotherapy in the treatment of the disease, because it is found that the more readily the temperature can be reduced by a bath or sponge the better the prognosis.

Lancet, London

January 20, I, No. 3, pp. 139-210

12 Examples of Resources of Surgery in Certain Emergencies. C. A. Ballance.
13 *Sensory Disturbances from Cerebral Lesions. H. Head and G. Holmes.
14 Salvarsan in Syphilis. W. Evans.
15 Practical Results of Recent Advances in Diagnosis and Treatment of Syphilis. J. H. Sequeira.
16 Intestinal Myiasis. E. A. Cockayne.
17 Double Coxa Vara with Other Deformities Occurring in Brother and Sister. L. E. Barrington-Ward.
18 *Functions of Tonsils and Appendix. K. H. Digby.

13. **Sensory Disturbances from Cerebral Lesions.**—In this paper the authors discuss the sensory disturbances produced by lesions of the cerebral cortex. Their conclusions are as follows: A cortical lesion may reduce the accuracy of response from the affected part to graduated tactile stimuli. The form assumed by this defective sensibility differs from that produced by lesions at other levels of the nervous system. The affected part may respond to the same graduated hair as the normal hand; but this response is irregular and uncertain. Increasing the stimulus may lead to no corresponding improvement and even the strongest tactile hair may occasionally evoke less certain answers than a hair of much smaller bending strain. Moreover, a touch with the unweighted esthesiometer may be as effective at one moment as the same instrument weighted with 30 gm. at another. In such cases no tactile threshold can be any longer obtained. This irregularity of response is associated with persistence of the tactile sensation and a tendency to hallucinations of touch. Where the sensory defect is not sufficiently gross to abolish the threshold, persistence, irregularity of response, and a tendency to hallucinate may still disturb the records. In all cases in which tactile sensibility is affected, whether a threshold can be obtained or not, fatigue is induced with unusual facility. Although the patient may cease to respond to tactile stimuli over the affected part in consequence of fatigue, his answers will remain as good as before from the normal parts. The fatigue is local and not general. With stationary cortical lesions, uncomplicated by states of shock or by diaschisis, sensibility to touches with cotton-wool may produce a sensation which seems "less plain" to the patient, and his answers may show the same inconstancy so evident when he is tested with graduated tactile stimuli. A pure cortical lesion leads to no change in the threshold to measurable painful or uncomfortable stimuli. Nor does the patient express greater dislike to these stimuli on one side than on the other. A prick may be said to be "plainer" or "sharper" on the normal than on the affected side, but this is due to a defective appreciation of the pointed nature of the stimulus and bears no direct relation to the painfulness of the sensation evoked.

Whenever thermal sensibility was disturbed the following changes were found: The neutral zone, within which the stimulus was said to be neither hot nor cold, was considerably enlarged in comparison with that observed on similar normal parts of the same patient. The patient complained that, although he recognized correctly the nature of the stimulus, it seemed "less plain" than over normal parts. His answers were less constant and less certain; a temperature recognized without difficulty at one time seemed doubtful at another. The power of discriminating the relative coolness of two cold stimuli or the relative warmth of two hot tubes may be diminished. Thus 20 C. may be said to be the same as ice, although both are uniformly called cold, and 40 C. may seem as warm as, or even warmer than, 48 C. The faculty of appreciating the relation to one another of two temperatures on the same side of the scale is disturbed. In all their cases the disturbance in the faculty of recognizing posture and passive movements was greater towards the peripheral parts of the affected limb. When a patient with unilateral disturbance of these faculties attempts to point to some part of his body, defective knowledge of its position causes greater error than want of recognition of posture and movement in the hand with which he points. When testing the patient's power of appreciating passive movement the answers are frequently uncertain and hallucinations of movement may occur. And yet the patient may be remarkably consistent and accurate when normal parts are tested.

The power of localizing a stimulated spot is not commonly lost as a consequence of cortical lesions. This faculty is independent of the power of recognizing the position of the affected limb; appreciation of posture may be lost, although localization is not in any way disturbed. If the power of localization is lost the patient will be unable to recognize not only the position of a spot touched, but also the position of a prick. When localization is defective the patient does not habitually localize in a particular direction, but ceases to be certain where he has been touched or pricked. The condition of tactile sensibility and the accuracy of the simultaneous compass-test are closely associated; a raised tactile threshold is usually accompanied by a raised threshold for the appreciation of two points simultaneously applied. Should the power be preserved of recognizing two points when the compasses are applied consecutively, localization will be found to be intact. The patient's appreciation of the two points when they are separated by an interval of time is due to the recognition of the separate locality of the two spots touched. The power of estimating the relative weight of two objects of the same size and shape is readily disturbed by cortical lesions. The appreciation of size, shape, and form, suffers like all tests which imply a relation.

18. **Functions of Tonsils and Appendix.**—The hypothesis advanced by Digby is that these particular lymphatic structures protect the body against chance infection by a process of continual auto-vaccinations. Any bacteria in the vicinity are attracted by positive chemotaxis through the overlying epithelium into the lymphatic nodule. The bacterial attack, having been invited in a region most favorable to the defensive mechanisms of the body, is nearly always repulsed. In accordance with that over-production which is so characteristic of biologic response, specially trained lymphocytes and a great excess of specific bacteriolysins and antitoxins are produced. These enter the general system and lessen the risk of a successful bacterial infection at a more vulnerable part. Thus, more or less immunity against organisms is acquired by the individual without his obviously suffering from disease. On rare occasions the lymph node is overcome and the disease develops; but the body has meanwhile become better able to withstand a general invasion.

The facts given in favor of this hypothesis are as follows: Position, structure and distribution of the subepithelial glands. The subepithelial glands bear the brunt of the attack in faucial and intestinal infections. Scarlet fever, typhoid fever and appendicitis are sound examples. In infantile enteritis the Peyer's patches are swollen and infected. The subepithelial glands are largest and most active in young children at a period when individuals are acquiring immunity to the various common infections. In old age all lymphatic structures tend to atrophy. The subepithelial glands hypertrophy as a result of repeated infectious diseases. Whooping-cough, scarlet fever, measles and "colds" (especially if associated with deficient exercise or unhygienic surroundings) lead to enlargement of tonsils and adenoids. General increase of lymphatic structures signifies prolonged bacterial assaults and may be accompanied by a toxin-weakened heart, the so-called status

lymphaticus. It is often observed during scarlatinal epidemics that a person may apparently secure immunity by a very mild tonsillitis which is unaccompanied by rash, malaise, or other signs of general injury. In culminating infections, where septicemia is early and fatal, the lymphatic reaction is poorly developed. Paraffin sections of the faucial tonsils repeatedly show bacteria passing through the covering of stratified epithelium and entering the lymph-nodes. A larger number of mitoses are seen in the lymph-nodes of subepithelial glands in certain infections. The lymphocytes are formed in lymph-nodes. In faucial and intestinal infections these cells are increased in number in the blood. A lymphocytosis accompanies polynuclear leukocytosis in pyogenic inflammation and occurs alone, or predominantly, in scarlet fever, measles, variola, infantile gastro-enteritis, some cases of diphtheria, pertussis, rickets and syphilis. In enteric fever, although there is a diminution of the total number of white corpuscles, yet the lymphocytes are increased in number. The almost constant presence of lymphocytes about an infected area seems to indicate that these cells play an antibacterial part. In connection with the greater activity of the lymphatic tissues in children, it is interesting to note that a lymphocytosis is more easily provoked in early life.

Dublin Journal of Medical Science

January, No. 481, pp. 1-80

19 Recent Legislation in Its Bearing on Infant Life. A. J. Horne.
20 Relapsing Fever Due to Rat-Bite. J. O'Carroll.
21 Medical Inspection of Schools and School Children. J. B. Story.

Malaya Medical Journal

October, IX, No. 4, pp. 1-57

22 Acetifying Air and Rice Bacteria Cause of Polyneuritis Gallinarum. J. H. F. Kohlbrugge.
23 Beriberi in Christmas Island. W. MacDougall.
24 Periodicity in Beriberi. G. E. Brooke.

British Journal of Children's Diseases, London

January, IX, No. 97, pp. 1-48

25 *Purpura in Infective Diarrhea. H. D. Rolleston and J. B. Molony.
26 Mortality and Morbidity in Hereditary Syphilis. C. F. Marshall.
27 Case of Myatonia Congenita. J. R. Charles.
28 Diphtheria of Esophagus. J. D. Rolleston.
29 *Case of Acute Purulent Arthritis in Child of Ten Months, with Radiograph. J. Burfield and A. J. Cleveland.
30 Retrospect of Otology, 1911. M. Yearsley.

25. **Purpura in Infective Diarrhea.**—The authors are of the opinion that symptomatic purpura in infective diarrhea mainly occurs on the abdomen and chest of infants under the age of 1 year. It is usually a terminal phenomenon in prolonged cases. The prognosis in these cases is extremely grave.

29. **Acute Purulent Arthritis.**—The appearance and history of this patient suggested a periosteal hemorrhage due to scurvy rickets and it was decided to put the limb at rest as far as possible and alter the diet. The child, however, got rapidly worse, so he was given an anesthetic and *x*-rayed. The radiograph showed two important features very clearly. (1) There was no destruction of the bones. (2) The head of the femur was at an abnormal distance from the acetabulum. This proved that the case was one of acute arthritis of the hip, and not an acute epiphysitis or osteomyelitis, or a periosteal or epiphysial hemorrhage. At the operation a quantity of thin pus escaped from the distended joint, but they could find no trace of bone disease. The child did remarkably well up to a certain point. The temperature became normal and it seemed to have quite recovered, when about a month later the skin wound seemed to get re-infected. An extensive cellulitis followed, from which the child died.

Journal of Laryngology, Rhinology and Otology, London

January, XXVII, No. 1, pp. 1-72

31 Case of Melanotic Sarcoma of Nose. G. Wilkinson.

Australian Medical Journal, Melbourne

December 16, I, No. 22, pp. 231-240

32 Analysis of 312 Cases of Laryngeal Diphtheria; Outline of Treatment. F. V. Scholes.
33 Diphtheria Carriers in School Epidemic: Treatment. G. Leary.

Annales des Maladies des Org. Génito-Urinaires, Paris

December 15, XXIX, No. 24, pp. 2269-2304

34 Remote Results of Prostatectomy. (Résultats de 207 pros tatectomies.) V. Pauchet. (Résultats éloignés des prostatectomies.) R. Gonzales.
35 *Extensive Resection of the Bladder. (Les résections larges de la vessie.) D. Giordano and T. Rovsing.

35. **Extensive Resection or Removal of Entire Bladder.**—Rovsing's article was summarized in THE JOURNAL, Dec. 16, 1911, p. 2035.

Archives Générales de Chirurgie, Paris

December, V, No. 12, pp. 1321-1440

36 Traumatic Rupture of Abdominal Wall. (L'éclatement sous-cutané traumatique de la paroi abdominale.) F. Legueu and H. Lorin.
37 *Remote Ulceration and Perforation of the Intestine with Cancer of the Rectum. (Des ulcérations et perforations intestinales à distance dans le cancer de rectum.) A. Chalier and F. Tomasset. Commenced in No. 11.
38 Snapping Wrist. (Un cas de poignet à ressort par rétraction des tendons fléchisseurs.) P. Mauclaire.

37. **Remote Ulceration in the Intestine with Cancer of the Rectum.**—Chalier and Tomasset say that their present article supplements several others that have appeared on remote ulceration in the bowel with cancer in the small intestine and colon. They have been able to find only seventeen cases of such lesions with cancer of the rectum, while fifty with cancer of the colon are on record. In most cases the ulceration above is a necropsy surprise, but the possibility should always be borne in mind when there is stenosis, and obstinate fetid diarrhea with rectal cancer should suggest ulcerative colitis above; an artificial anus in the colon or removal of the cancerous rectum will ward off trouble from this source. In thirteen cases the intestine had perforated; the hole was in the cecum in three cases; in the ascending colon in one, in the transverse and descending colon in two, in or near the sigmoid flexure in six, and in the small intestine in one case. In a case reported by Kocher, the perforation occurred during an enema given under pressure. In some cases the bowel ruptured from distention without ulceration; the point most liable to rupture is, in the small intestine, at the point where the mesentery is attached; in the colon, it is at its junction with the cecum, at the right side, in front, where the wall is thinnest. The peritoneum tears first, parallel to the axis of the intestine, as it is less elastic. The patients soon died in all the cases on record, as operative treatment came too late or the perforation was overlooked. To be effectual, treatment should be based on the assumption that a perforation has occurred or is impending whenever there is obstruction from a cancer in the rectum, and an exploratory laparotomy should not be delayed; if there are no signs of perforation or peritonitis, mere colostomy will suffice. Jaboulay utilized the perforation for the artificial anus in one case. The possibility of multiple perforation should not be forgotten. In conclusion, the necessity for a prompt artificial anus in all cases of inoperable cancer of the rectum is reiterated as the routine procedure, even before obstruction has occurred.

Archives des Maladies du Cœur, etc., Paris

December, IV, No. 12, pp. 737-827

39 Estimation of Blood-Pressure. (Etude comparée des méthodes palpatoire et oscillatoire dans la mensuration clinique de la pression artérielle.) V. Cordier and J. Rebattu.
40 The Blood-Dust as Seen with the Ultramicroscope. (Etude sur les hémokonies ou granulations libres du sang observées à l'ultramicroscope.) F. Cottin.

Lyon Chirurgical, Lyons

January, VII, No. 1, pp. 1-120

41 *Urinary Complications with Cancer of the Rectum. (Des complications urinaires au cours du cancer du gros intestin, et des indications opératoires qui en découlent.) L. Bérard and J. Murard.
42 *Volvulus of Sigmoid Flexure. (Volvulus du colon pelvien.) E. Duroux and L. Mangini.
43 Membranous Pericolitis. G. Cotte.

41. **Urinary Complications of Cancer of the Large Intestine.**—Bérard and Murard remark that the problem is to detect the complications on the part of the urinary apparatus with a known cancer in the large intestine or to suspect the cancer concealed behind the acute urinary disturbances. They review

twenty-two cases, including two from their own practice. In one of the latter a man of 60 had complained of gastro-intestinal disturbances for six months, with colics, diarrhea and pyuria for the last two months, with great loss of weight. A tender bunch could be palpated above the pubis, on the right side; rectal palpation and catheterization of the bladder were negative. In introducing the catheter a few days later it became clogged and the obstruction was found to be from a lump of feces, and a laparotomy revealed a cancer in the sigmoid flexure which had perforated into the bladder. In their other case a cancer in the sigmoid flexure was relieved by an artificial anus above, but it came too late to prevent perforation of the bladder by the invading cancer. The pains in the bladder in this case disappeared at once after the artificial anus had been made; this permitted lavage and disinfection of the bladder, materially improving the patient's condition, and possibly permitting radical removal of the cancer in favorable cases. Small hot enemas, frequently repeated, often give great relief in the inoperable cases, but an artificial anus above may transform the condition and is always of benefit, warding off further irritation of the environment of the tumor and inflammation and infection of the urinary apparatus. The cases cited are all from French literature, with one exception.

42. **Volvulus of the Lower Colon.**—Duroux and Mangini give the details of two cases of volvulus of the sigmoid flexure region, and discuss the best methods of treatment. One of their patients recovered after the enormously distended loop, the pelvic colon, was untwisted and reduced after the gas distending it had been voided through a tube introduced through the anus. In the other case the volvulus was extreme and an artificial anus was made but did not act properly as, instead of being in the cecum as supposed, the opening had been made in the displaced and twisted colon. The patient succumbed not long after a second laparotomy. In both cases the mesentery showed traces of inflammation, evidently the main factor in the volvulus. Wearing a supporting bandage and dieting may prove useful in warding off actual volvulus, when symptoms suggest that such is impending. Once established, electric enemas may aid in promoting absorption of gas by the intestinal mucosa, and this in turn may relieve the distention and allow the twisted intestine to straighten out. Other medical measures which have been advocated are injection of a gas supplementary to opium and massage of the abdomen, injection of water under considerable pressure, as Tillaux has recommended—these medical measures may succeed if the volvulus is not complete and definite, but when it is of the latter variety nothing but a prompt operation can prove effectual.

Presse Médicale, Paris

January 6, XX, No. 2, pp. 9-24

44 **Specificity of Serotherapy for Snake Bite.** (Etudes sur la spécificité des sérums antivenimeux.) M. Arthus.
45 **General Spinal Anesthesia.** (La rachianesthésie générale: rachi-strychno-stovainisation.) T. Jonnesco.
46 **Salvarsan in Obstetrics.** (Des résultats donnés par le salvarsan en obstétrique.) C. Jeannin.

Semaine Médicale, Paris

January 16, XXXII, No. 2, pp. 13-24

47 **Structure of Cranial Nerves and of Spinal Nerve-Roots and Its Relation to Disease.** (La structure réelle des nerfs craniens et des racines rachidiennes de l'homme et ses relations avec les processus pathologiques; les inflammations et les néoplasies en particulier.) J. Lhermitte and B. Klarfeld.

Beiträge zur Klinik der Tuberkulose, Würzburg

XXI, No. 3, pp. 247-362. Last indexed Jan. 6, p. 69

48 **Distribution of Tuberculosis in Swiss Province.** (Verbreitung der Tuberkulose, speziell der Lungentuberkulose, im Kanton Glarus.) F. Spieler.
49 *Graphic Record of Lung Findings. (Die graphische Darstellung des Lungenbefundes.) J. Nahm.
50 *Case of Atrophy of the Lung. (Fall von "Lungenatrophie.") A. Bauer.
51 *Diagnosis of Air Above Pleuritic Effusion. (Zur Diagnostik kleiner Gasblasen über pleuritischen Ergüssen.) H. Kraus.
52 *Serotherapy of Tuberculosis to Date. (Die bisherigen serotherapeutischen Bestrebungen bei Tuberkulose.) P. Piehl.
53 *Severe Anemia in Tuberculosis. (Die schweren Formen der Anämie im Zusammenhange mit der Tuberkulose samt einigen Bemerkungen über die Tuberkulose (perlsüchen Ursprungs (Typus bovinus) bei den Menschen.) A. Gluzinski.
54 **Madder in Treatment of Tuberculosis.** (Krapp bei Tuberkulose.) A. Bauer.

49. **Graphic Signs in Pulmonary Work.**—THE JOURNAL has published articles on the subject of using signs or hieroglyphics to represent the auscultation and percussion findings, "clinical shorthand records." Nahm here gives the chart and signs which he has found most convenient for the purpose. [Barach's signs, based on the phonetic values, were illustrated in THE JOURNAL, Nov. 6, 1909, page 1541; they are widely used.]

50. **Atrophy of the Lungs.**—In the case reported by Bauer the patient was admitted to a sanatorium with the diagnosis of pulmonary tuberculosis, but she proved to be free apparently from this, and the abnormal findings were the result of a partial lack of development of the lung or, as he styles it, atrophy of the lung on a basis of inherited syphilis. The Wassermann reaction was positive in the serum and the albumin reaction in the scanty sputum.

51. **Diagnosis of Air Above Pleuritic Effusion.**—Kraus calls attention to the instructive findings with roentgenoscopy when the patient is examined erect and then with the trunk inclined at an angle of about forty-five degrees. As the trunk is thus bent over, a clear space is seen above the level of the fluid, while in the erect position there is nothing to show the presence of the spontaneous pneumothorax. It springs into view on the screen as the level of the fluid shifts.

52. **Serotherapy of Tuberculosis to Date.**—Piel comments on the increasing vogue of serotherapy in tuberculosis during the last eight or ten years but adds that opinions are still divided as to the dosage, and especially the dosage at various ages. He reviews the history of serotherapy, especially of the Maragliano, Neporoschny and Marmorek preparations. He remarks in conclusion that we have not made much advance in serotherapy after all in the last twenty years, and it is possible that we are on the wrong road, but that the results to date justify further trials, keeping watch over the outcome for years and always with a scientifically critical mind.

53. **Severe Anemia with Tuberculosis.**—Gluzinski has been studying the question why tuberculosis in some cases is accompanied by changes in the blood suggesting pernicious anemia while in others the blood does not feel the effect of the bacterial intoxication so severely. His experimental research and clinical observation suggest that the tubercle bacilli involved in these cases with severe anemia are probably of the bovine, not the human, type. Tuberculosis of this anemic type is found most often in children, which harmonizes with the greater opportunities during this age for contracting tuberculosis of the bovine type. In a case described in detail a woman of 44, previously healthy, was under his care for five years, the clinical diagnosis being progressive pernicious anemia, chronic gastro-enteritis and ulcerations in the intestine. Necropsy confirmed this, but with the unexpected discovery that the gastro-intestinal trouble was a primary tuberculosis of the intestines. The tuberculous affection had evidently displayed a tendency to spontaneous healing in some parts, which explains the intermittent character of the symptoms observed. The tubercle bacilli involved were of the bovine type, and his experimental research confirmed the assumption that the toxins of bovine tubercle bacilli have a tendency to induce severe changes in the blood, of the chlorotic type, with leukopenia, lymphemia and possibly eosinophilia, in marked contrast to the blood findings when the animals were treated with the toxins of tubercle bacilli of human origin. These assumptions were further confirmed by the blood and marrow findings in a girl of 12 with tuberculous lymphadenitis and fatal progressive anemia. Gluzinski adds that there must be some predisposition on the part of the blood and marrow in such cases, just as anemia is not observed in every person harboring the bothriocephalus.

Deutsche medizinische Wochenschrift, Berlin

January 11, XXXVIII, No. 2, pp. 49-96

55 *Abdominal Injury. (Ueber Bauchverletzungen.) Riedel. Commenced in No. 1.
56 *Sulphur Reaction in the Urine with Cancer. (Eine Schwefel-Reaktion im Harne Krebskranker.) H. Salomon and P. Sazl.

57 Moving-Picture Apparatus for Diagnosis of Internal Disease. (Ueber einen neuen Kinematographen zur Diagnostik mittels Röntgenstrahlen bei inneren Leiden.) E. Grunmach.
58 *Disturbances in the Internal Secretion with Diseases of the Pancreas. (Einige Störungen der inneren Sekretion bei Pankreaserkrankungen.) M. Cohn and H. Peiser.
59 *Fatal Cachexia with No Gross Pathologic Anatomic Findings. (Tödliche Kachexie ohne gröbere anatomische Grundlage—einfache chronische Gastritis; intestinale Autointoxikation und Leberzirrhose.) W. Rindfleisch.
60 Roentgenotherapy in Dermatology. M. Joseph and C. Siebert.

55. **Abdominal Injuries.**—Riedel reviews his extensive experience in this line, comparing it with the results of recent experimental research—an instructive survey of the field of abdominal trauma and the prognosis. He asserts that the most certain sign of injury of an abdominal organ is rigidity of the abdominal musculature; this, he says, follows when the abdominal cavity becomes soiled with stomach or intestine content or blood. The quicker and the more abundant the flow of blood or escape of stomach or bowel content, the more promptly the abdominal muscles stiffen. This may also occur in exceptional instances with a circumscribed injury of the abdominal wall and mere contraction of the bowel. Rupture of the stomach is rapidly followed by this rigidity, but the bowel contracts after rupture so that its contents escape less readily and the abdominal wall stiffens more slowly. Microbes from the ruptured intestines seem to require an interval of six hours before they can proliferate in the abdominal cavity. When the hemorrhage is from injury of the liver, he advises suturing omentum in the wound to arrest the bleeding, but says that the injured spleen had better be entirely removed. A ruptured kidney is best treated conservatively unless it seems incapable of recuperation. He states that mild contusions, without injury of abdominal organs, sometimes induce rapid meteorism, developing in the first few hours after the trauma. Even slight abdominal trauma may entail severe symptoms, but they gradually decrease in intensity, while with actual organic injury the intensity of the symptoms keeps increasing. Mild contusions seldom lead to permanent adhesions, kinks in the bowel, etc., and such need not be suspected unless the patient loses flesh and looks badly in the following year. Of equally rare occurrence are subcutaneous ruptures of sound abdominal muscles. Compound injuries exposing and infecting the peritoneum are comparatively frequent and are hard to manage; the best means to ward off peritonitis is by repeated opening and evacuating the pus pockets as they develop between the layers of the muscles.

56. **Sulphur Reaction in Urine with Cancer.**—Salomon and Saxl give the details of their urine test for cancer based on the qualitative determination of the sulphur split off by hydrogen dioxid from the neutral sulphur in the urine, in the barium sulphate precipitate. A previous communication on the subject was summarized in THE JOURNAL May 6, 1911, p. 1371. They now report further experiences with the test, the results being negative in only six of forty-one cancer patients, while a negative response was obtained in 172 of the 182 non-cancer cases. They remark that the technic requires skill and experience to ensure reliable findings, but that the test is not affected by food or the specific gravity of the urine or by the presence of fever, anemia or cachexia.

58. **Symptoms of Hyperthyroidism with Disease of the Pancreas.**—Cohn and Peiser state that they became impressed with the tendency to exophthalmos in their last few patients with pancreatitis, and they investigated for other signs of thyroid hyperfunctioning although none of the patients had a goiter. Their list includes two women 27 and 62 years old and one man of 44, all with acute hemorrhagic pancreatitis; a young woman with purulent pancreatitis, with necrosis, and a man of 30 with chronic interstitial pancreatitis. There was more or less exophthalmos in four of the total five cases; the Graefe sign was present in four, the Moebius and Stellwag signs, tremor and dermographism in five; relative lymphocytosis in four; phloridzin glycosuria in five, and the thyroid was tender in all of the patients. The composite curve of the findings closely resembles the curve in true exophthalmic goiter, and points unmistakably to disturbances in the internal secretions when the pancreas is diseased.

59. **Fatal Cachexia Without Gross Anatomic Basis.**—Rindfleisch remarks that an acute cerebral syndrome may prove fatal with negative pathologic anatomic findings; such cases are occasionally encountered. But it is extremely rare to meet a case in which a chronic affection entails fatal cachexia and yet no pathologic anatomic cause for it can be discovered at necropsy. He reports a case of this kind, the patient a stucco worker of 48, whose progressive cachexia without diarrhea terminated fatally in three years, and the only findings were those of a chronic gastritis entailing atrophy of the mucosa. The favoring factors were evidently bad teeth, insufficient mastication, liquor and tobacco. Simple gastric cancer generally runs a more rapid course; it usually, he says, affects persons with a previously good stomach, and is suggested by slight motor disturbances, changes in shape on roentgenoscopy, positive Salomon test findings and occult blood in the stools. In the case reported, all the above were negative, but there was some pigmentation of the skin, although none in the mucosæ; it is interesting to note that achylia usually accompanies Addison's disease. Treatment of this protracted and refractory chronic gastritis is that of gastritis and pernicious anemia in general, especially with a diet preferably of vegetables, excluding meat and eggs. In the case reported, the secondary cirrhosis of the liver was a necropsy surprise. A similar cachexia from gastric achylia was noted also in two other men recently, between 30 and 40.

Medizinische Klinik, Berlin

January 7, VIII, No. 1, pp. 1-46

61 *Diabetes of Nervous Origin. (Ueber neurogenen Diabetes.) C. von Noorden.
62 Complex Structure of Gall-Stones in Relation to Gall-Stone Disturbances. (Welche Bedeutung besitzen die Kombinationssteine für die Auffassung des Gallensteinleidens?) L. Aschoff.
63 *Form of Purpura with Nephritis. (Ueber eine nephritische Form der Werlhofschen Blutfleckenkrankheit.) H. Eichhorst.
64 Foot-and-Mouth Disease. (Ueber Maul- und Klauenseuche.) M. Fischer.
65 Subsidence of Infiltrations After Acute Intercurrent Infections in Children. (Heilung von Infiltrationen im Kindesalter nach akuten Infektionen.) E. Baumgarten.
66 Physiology of Heart Functioning. (Wo entstehen die normalen Bewegungsreize im Warmblüterherzen und welche Folgen für die Schlagfolge hat ihre reizlose Ausschaltung?) K. Brandenburg and P. Hoffmann.
67 *The Fatalities at the Municipal Shelter at Berlin. (Die Massenerkrankungen im Städtischen Asyl für Obdachlose in Berlin, 24. bis 31 Dezember 1911.) F. Pinkus.
68 Bromids in Epilepsy. (Brombehandlung der Epilepsie.) R. Bing.

61. **Neurogenic Diabetes.**—The patient in von Noorden's case, a man of 40, had an inherited neuropathic taint but the glycosuria did not develop until the age of 36, following a period of great anxiety connected with the massacres in Russia. Severe insomnia, loss of appetite and weight and obstinate constipation were accompanied by 1.5 per cent. sugar in the urine, persisting even on antidiabetic diet. Sleepless nights were followed by exacerbation of the glycosuria. Although the nervous element was so marked in this case, as in a number of others von Noorden has encountered, yet there is always great danger that true diabetes may develop from the nervous form. This actually happened in this case; the patient lost his glycosuria under slight restriction of carbohydrates, with one day a week in which no carbohydrates were taken. He kept well on this diet for a year. Then another physician found the urine free from sugar on two analyses and advised the patient that antidiabetic restrictions were no longer necessary, so he commenced to eat at will. It was not long before he had pains in the calves of the legs and he soon began to lose weight and 5.6 per cent. sugar was found in the urine. Attempts to reduce the carbohydrates now brought on acetonuria, and the man is now a confirmed diabetic. It seems evident that "nervous" diabetes is a danger signal and precursor of true diabetes and should be managed accordingly. The individual tolerance for carbohydrates should be determined and the diet based thereon; the restrictions need not be severe. One may possibly thus impose unnecessary restrictions on a few patients, but this will do them no harm, while neglect of this precaution may wreak great harm to others.

63. Nephritic Form of Purpura.—Eichhorst reports three cases of hemorrhagic purpura in which the kidneys were involved. This hemorrhagic nephritis seems more liable to occur in the cases with a chronic course and tendency to recurring subcutaneous extravasations of blood. His cases demonstrate further that the nephritis in these conditions may be of the interstitial or parenchymatous type, but both are extremely refractory to treatment and yet they do not seem to display any influence on the myocardium or pulse, and do not entail debility or uremia. Notwithstanding the dubious prognosis as to ultimate recovery, the nephritis need not be regarded very seriously. His patients were a girl of 15 and two young men and the symptoms of nephritis have persisted to date, although the general condition is otherwise good. No medicinal or other measures applied for the purpura and its complications seemed to have more than symptomatic effect.

67. The Fatalities at the Berlin Municipal Shelter.—Pinkus closes his official report on the clinical and necropsy findings with a description of the consternation and constant work of all who had anything to do with the tragic occurrences in the municipal lodging house during Christmas week. Some of the doctors did not leave their posts for five nights, and the morgue was crowded with arriving cadavers. He states that there were 163 cases of the mysterious sudden illness with seventy-two deaths. No woman was affected, which is an argument in favor of the methyl alcohol theory, as women are not admitted to the saloon where the methyl alcohol had been dispensed. The men were taken sick also always during the hours when the saloon was open. No case occurred among the attendants at the municipal shelter, and the saloon incriminated had only purchased the stock of methyl alcohol five days before the first men were taken sick. A few of the cases occurred in other parts of the city. After the saloon was closed no further cases developed. Pinkus suggests that the sickness may have been a combination of botulism, sausage poisoning, and the effects of drinking methyl alcohol, some of the patients exhibiting symptoms of both. (See the Berlin Letter in THE JOURNAL, Feb. 3, page 358.)

Münchener medizinische Wochenschrift

January 9, LIX, No. 2, pp. 65-120

69 *Serodiagnosis of Tumors. (Ueber Serodiagnostik der Geschwülste mittels Komplementbindungsreaktion.) E. v. Dungern.

70 Anaphylaxis as Factor in Infection and Immunity. III. (Rolle der Ueberempfindlichkeit bei der Infektion und Immunität.) A. Schittenhelm and W. Weichardt.

71 Is Anaphylaxis a Factor in the Birth Act? (Ist die Geburt als ein anaphylaktischer Vorgang aufzufassen?—Biologische Untersuchungen.) P. Esch.

72 *Influence on the Heart of the Presence of a Myoma. (Experimentelles und Anatomisches zur Frage des sogenannten Myomherzens.) M. Neu and A. Wolff.

73 Pituitary Extract as Oxytocic. (Hypophysenextrakt als Wehenmittel bei rechtzeitiger und vorzeitiger Geburt.) A. Hamm.

74 Roentgenoscopy of the Lungs. (Die radiologische Untersuchung der Lungenspitzen. Das Hustenphänomen.) S. Kreuzfuchs.

75 Salvarsan in the Blood After Intravenous Injection. (Salvarsan im Blute bei intravenöser Injektion.) J. Abelin.

76 *Unilateral Cramps in Diagnosis. (Ueber die diagnostische Wertung halbseitiger Krämpfe.) E. v. Malaisé.

77 Serotherapy of Postdiphtheric Paralysis. (Behandlung postdiphtherischer Lähmungen durch Heilserum.) M. Crohn.

78 Superheated Air in Treatment of Infantile Eczema. (Heissluftbehandlung der Ekzeme im Säuglingsalter.) J. Perlmann.

79 *The Alien Insane. (Die ausländischen, insbes. die überseeischen Geisteskranken.) W. Weygandt.

80 Vaccine Therapy of Gonorrhea. (Weiteres zur Frage der Behandlung der Gonorrhoe beim Manne.) A. A. L. Menzer.

81 Improved Technic for Blood-Count and Hemoglobin Percentage. (Ueber Prüfung und Eichung des Sahlischen Hämometers und über Verbesserungen der Methoden der Erythrozytenzählung und Hämoglobinbestimmung.) K. Bürker. Commenced in No. 1.

69. Serodiagnosis of Tumors by Fixation of Complement.—Dungern has succeeded in evolving a technic which gives reliable specific findings positive in all the tumor cases and negative in the others, as he shows by tabulation of the findings in 121 patients and twenty-two healthy controls. The only dubious findings were in some syphilitics with positive Wassermann reaction. It is remarkable, he comments, that all tumors seem to react in this specific way by fixation of complement while this does not occur with normal growth, not even with the extreme growth of tissue in a pregnancy. Benign tumors do not give such a pronounced reaction as the malignant. His technic is simple: one part of finely sliced tumor tissue is mixed with 98 per cent. alcohol and the extract is ready to use after from twelve to forty-eight hours. After filtering it is mixed with two parts of physiologic salt solution. The serum to be tested is used unwarmed in the amount of 1/20 c.c. The complement is guinea-pig serum 1/20 in 1 c.c. salt solution. The mixture is allowed to stand three hours at room temperature. He used beef blood for the tests and his extracts were made from mammary or pharyngeal carcinoma tissue or from a vulvar epithelioma.

72. The Heart with Myoma.—Neu and Wolff present experimental and anatomic evidence to prove that there is not a special type of injury of the heart due to the presence of a myoma. In six cases in which the hearts were examined, they showed merely the results of injury from excessive losses of blood or wasting away of the body; that is, a tendency to brown atrophy or fatty degeneration or both combined, such as are common in these conditions.

76. Diagnostic Importance of Jacksonian Epilepsy.—Malaisé discusses the various affections which may induce epileptiform spasm limited to one side, saying in regard to syphilis of the brain that subsidence of the disturbances under treatment for syphilis does not always mean that the underlying lesion is necessarily syphilitic; he adds also that a gumma in the brain which does not yield to specific treatment should be removed by an operation. He says of hysteria that the hysteric unilateral epileptiform spasm may resemble in every respect regular Jacksonian epilepsy and may be followed by transient or permanent paresis in the region involved and by disturbances in speech. Ballet has stated that the hysteric spasm is generally accompanied by a fluttering of the eyelids and waves in the abdominal musculature. A temperature above normal testifies for an organic affection. Jacksonian epilepsy may be one manifestation of genuine epilepsy, but in this case no circumscribed anatomic focus can be found. He mentions further the recent research on the hemiparesis or monoparesis which may be left after subsidence of a general epileptic seizure; Redlich asserts that such (or at least a hemihyperesthesia) will be found in 50 per cent. of all patients after a general epileptic seizure. This suggests that there must be some focus in one hemisphere, which, although not the exclusive cause for the epileptic seizures, yet may be the primal source for the epileptic irritation of the brain. This assumption opens the way possibly for removal of the cause and at least it will promote sharper differentiation of the different forms of epilepsy. Jacksonian epilepsy may also be observed in those strange cases of brain pseudotumor in which the symptoms subside entirely in time, and not a trace of the supposed serous meningitis or swelling of the brain could be detected in the few cases that came to necropsy.

79. The Alien Insane at the Hamburg Asylum.—Weygandt describes the hard conditions that prevail at Hamburg on account of the rigorous provisions in the United States to keep out undesirable immigrants. The steamer lines bring back to Hamburg those refused admittance to the United States, and the great numbers, the multiplicity of languages, and other causes combine to render the problem of the alien insane at Hamburg a peculiarly difficult one. The authorities at Hamburg strive to return to their home provinces the alien insane, but this often requires long correspondence, sending of photographs, etc. He adds that the United States deports emigrants that become insane within three years after their arrival, and they often have become so Americanized in this period that their photographs are not recognized in their home town. Weygandt's article is most interesting as showing the admirable working of our emigration laws as others see and feel their effects. In 1910, 1,041,570 emigrants embarked from Hamburg for America; 379 were deported on account of insanity, and 709 were sent back as

having developed insanity or epilepsy within the three-year limit after their arrival. All nations and languages were represented; in some cases neither could be determined. Among the last 204 emigrants thus returned to Hamburg, 127 showed signs of dementia præcox, including twenty with catatonia. He cites only two cases of mistaken diagnosis; excitement over the theft of money had led to deportation of two healthy persons adjudged insane. Weygandt remarks in regard to the hygienic measures enforced in the German ports before embarkation, especially the bath, that they are disliked so intensely by the emigrants that thousands of them, especially those from Russia, avoid Germany and go by way of Austria or Switzerland to ship from French, Belgian or Dutch ports. Medical inspection of the hosts of emigrants at Hamburg is now restricted to testing the pupil reaction and knee-jerk and looking for signs of the tongue having been bitten or other physical anomalies, calling aside the suspects to examine them in detail later with the help of an interpreter. Weygandt thinks that much more might be accomplished in turning back those almost certain to be deported later and left on their hands, if trained psychiatrists, understanding the Slavic languages, could examine the emigrants during their three days' stay at the emigrant quarters. He concludes with the remark, "It is quite hopeless to expect any modification of the United States emigration regulations. A great deal, however, depends on the way they are enforced; at present this is done with great strictness. Whether a change in this respect may follow a change in the personnel of the officials, it is impossible to say." [This last sentence is peculiarly significant in view of the recent political shake-up at Ellis Island.—ED.]

Therapeutische Monatshefte, Berlin

January, XXVI, No. 1, pp. 1-88

82 Drug Management of Pathologic Conditions in the Peripheral Circulation. (Pharmakotherapeutische Beeinflussung pathologischer Zustände am peripheren Kreislauf.) R. von den Velden.
83 *The Karell Milk Diet in Heart Disease. (Zur Anwendung der Karellschen Milchkur bei Herzkranken.) W. His.
84 Cardial Asthma. (Anwendung subkutaner Heroineinspritzungen bei Asthma cardiale nebst Bemerkungen über kardiale Dyspnoe.) A. Fraenkel.
85 *Red Light in Treatment of Pleurisy with Effusion. (Behandlung pleuritischer Exsudate mit Rotlichtbestrahlung.) L. Kuttner and A. Laqueur.
86 Salt-Free Dietetic Treatment of Eczema in Infants. (Zur Indikation und Technik der Behandlung des Säuglingsekzems mit molkenarmer Milch.) H. Finkelstein.
87 Arsenic in Dermatology. (Aphoristische Bemerkungen zur Arsentherapie in der Dermatologie.) J. Jadassohn.
88 *Form of Iron Needed in Chlorosis. (Eisenwirkung bei Chlorose.) W. Heubner.

83. The Karell Milk Diet in Heart Disease.—The special feature of the Karell "milk cure" is restriction to milk exclusively and very small amounts of it, not surpassing 800 or 1,000 c.c. of milk a day for five or six days. This is less than a quart of milk in the twenty-four hours, and clinicians have feared undernourishment and weakness from it, but experience has shown that these theoretical fears are ungrounded. The deficit on this diet is principally in the carbohydrates, the source of energy for the muscles, and this is not needed so much as the patients are kept in bed. Karell published in 1865 his favorable experience with this milk cure in hundreds of cases of heart disease, but not until 1907 was the method systematically applied outside of Russia except in Lenhartz' service, where it has been in use for eighteen years. His thinks that the time has come for an authoritative judgment on the value of this method, which he ranks very highly, although unable to explain completely the mechanism of its effect. He cites a number of instances to illustrate the benefit liable; sometimes there may be an interval of two or three weeks before the benefit becomes apparent. In one case reported, digitalis and diuretics had no effect until after a Karell course, diuresis commencing the sixteenth day after restriction to milk; in another case the diuresis began the sixth and reached its maximum the twelfth day. It is remarkable that on this small amount of milk the diuresis increases. One factor that explains the benefit is the reduction of production of toxins in the gastro-intestinal tract on the milk diet, and also the lesser filling of the abdomen. The small amounts of milk, sipped slowly, put an end to a tendency to flatulence, and thus indirectly relieve the heart, which suffers when the stomach or bowel is distended. The Karell diet excludes also a nervous-reflex action on the heart, and also toxic-uremic influences. The indications for the Karell cure include not only heart disease with a tendency to edema, but numerous cases of cardiac, renal and cardiopulmonary insufficiency. He lists the indications under eight heads: 1. The cardiac disturbances of the obese; he advises for these patients occasional interposition of a "milk day" but not a long "milk cure," as they are usually accustomed to eat freely and might respond with weakness of the heart to sudden deprivation of their usual ration. 2. With emphysema and chronic bronchitis accompanied by increasing weakness of the right heart, the dyspnea subsides in a few days on the Karell diet and longer courses are seldom necessary. 3. With cardial asthma with degeneration of the myocardium, the rapid subsidence of the disturbances is often surprising, especially when heart tonics and sedatives have previously failed to relieve. After a week at most the patient can be allowed to return to a light diet with fluids up to 1,200 c.c., repeating the Karell diet at need after an interval. 4. Angina pectoris is often remarkably benefited by the Karell diet, especially the mild form in which the attacks are not severe but recur frequently. Particularly good results are obtained with patients inclined to plethora and meteorism and the attacks occur when the stomach is full or the intestines distended. The Karell diet alone is not always effectual but often proves a valuable adjuvant to iodin, nitrites, massage of the heart and exercise, etc. 5. With insufficiency of the kidneys, the benefit from a transient restriction to a milk diet is conceded by all, especially when the heart shows signs of weakness and uremia is impending. 6. Rebellious effusions in the serous cavities often yield surprisingly soon to the influence of the Karell cure. Romberg has emphasized the advantages of a salt-poor diet in tuberculous ascites. His endorses this but in his experience effusions in the pleura and pericardium subsided more readily than in the abdominal cavity. 7. The Karell cure is often effectual as a supplement to digitalis when neither alone is of any use. 8. Valvular defects as such are no indication for the Karell cure but when the myocardium becomes insufficient and edema is developing, the restricted milk diet may give relief; the intensity and length of the course must be strictly individualized.

85. Red Light in Treatment of Pleural Effusion.—Kuttner and Laqueur induce hyperemia in the depths, to promote absorption of effusion, by applying the light from an arc or incandescent lamp, passing it through red glass to exclude the chemical rays. Experiments on animals proved the efficacy of the measure although the effect was much more marked in clinical cases as the human skin bears the exposures better. They report the details of a few cases from their extensive experience. The red light exposure is for twenty or thirty minutes a day; at the close of the sitting the skin of the region shows considerable hyperemia. The method is applied as an adjuvant to the usual measures for pleurisy with effusion.

88. Bivalent Iron Salts in Chlorosis.—Heubner suggests that chlorosis may possibly be defined as a condition in which the organism is unable to reduce the ingested iron to that form in which it can be taken up in the blood. It seems as if empiric experience had selected the one form of iron, namely, the bivalent ferrous salts, which is the form most readily utilized, while laboratory research has hitherto disregarded this distinction. In chlorosis the capacity for reducing the higher salts of iron, the ferric salts, to the lower salts, the ferrous salts, seems to be lost, but if the iron can be introduced in the ferrous form, the chlorotic organism works it up into hematin as under normal conditions. Good nourishment, arsenic, etc., aid in this synthetic process, while with a lack of bivalent iron the process can scarcely proceed at all. This fact explains the persisting vogue of Blaud's pills, of syrup of ferrous iodid, and certain natural mineral waters, all of which contain the iron in the form of ferrous salts, while the proprietaries on the market are generally made of ferric salts.

Zeitschrift für Geburtshülfe and Gynäkologie, Stuttgart

LXIX, No. 3, pp. 553-756. Last indexed February 10, p. 450

89 Very Young Embryo in Accessory Tube. (Ueber ein junges menschliches Ei im Mesosalpingiolum einer Nebentube.) M. Walthard.
90 The So-Called Lower Segment of the Uterus. (Zur Frage des sogen. unteren Uterinsegmentes.) A. Gräsel.
91 Sensibility to Cocain and Its Relation to the Secretion of Epinephrin. (Ueber Kokain-Empfindlichkeit und deren Beziehung zur Adreninsekretion in den verschiedenen Phasen des weiblichen Geschlechtslebens.) O. Ury.
92 Hemoglobinophil Bacterium as Cause of Puerperal Fever. (Ein hämoglobinophiles Stäbchen als Fiebererreger im Wochenbett.) C. Koch.
93 Dislocation of Thoracic Organs by Ovarian Tumors. (Veränderung des Situs der Brustorgane durch Riesenovarialtumoren.) W. Rübsamen.
94 Electric Excitability of the Uterus Muscle. (Experimentelle Untersuchungen über die elektrische Reizbarkeit der Uterusmuskulatur.) W. Rübsamen and J. Danziger.
95 *Laceration of Tentorium During Birth. (Tentoriumzerreissungen bei der Geburt.) R. Pott.
96 Origin and Growth of Myomas of the Uterus. (Ueber Wachsthum und Genese der Myome und Adenomyome des Uterus.) F. Heimann.
97 Fatty Degeneration in the Uterus Muscle. (Zur Kenntnis fettiger Gewebsveränderungen in der Uterusmuskulatur.) B. Ehrmann.
98 Adenocarcinoma of the Vagina. G. Hirsch.
99 Universal Hydrops of the Fetus. (Zur Kasuistik und Aetiologie des Hydrops foetus universalis.) O. Fischer.
100 Chronic Ulceration and Induration of the Vulva Accompanying Cancer of the Rectum. (Esthiomène infolge Carcinoma recti.) M. L. Muller.
101 Hematoma of Uterine Cervix. (Ueber postpartale Hämatome der vorderen Muttermundslippe.) C. Koch.

95. Laceration of Tentorium During Birth.—Beneke has recently called attention to the comparative frequency of laceration of the tentorium in new-born infants, this being the cause of the hemorrhages in this region. Pott gives here the details of thirty-three cases in which this laceration of the tentorium occurred. Since it has been sought more systematically, it has been found more frequently, being marked in six of the last fifteen infant cadavers examined. The necropsy findings are compared with the clinical course where possible, in the thirty-three cases. The findings show that laceration of the tentorium is liable to occur at any birth, while the danger increases proportionately with difficult delivery; the danger of laceration does not lie in the prolongation of the birth but in the traction to which the head is subjected, stretching the falx cerebri in the lengthwise direction of the skull. The laceration causes no symptoms; these are due to the resulting hemorrhage, and then only when the blood is dammed up in the region. The laceration heals so rapidly that there is scarcely a trace left by the end of three weeks, but relics of the hemorrhage may be long perceptible. In future, in forensic cases, the brain should be separated above the tentorium, leaving the latter unmolested. This will best reveal the conditions experienced during birth and the resulting injury for the child.

Zentralblatt für Chirurgie, Leipsic

January 13, XXXIX, No. 2, pp. 41-72

102 *Postoperative Paralysis from Constricting Band. (Zur Frage der Druckläh mungen nach Esmarch'scher Blutleere.) W. Wolf.

102. Postoperative Paralysis from Constricting Band.—Wolf comments on five cases recently published in which the patients found on rousing from the effects of the general anesthetic that the arm to which the Esmarch band had been applied had been left with paralysis. In the first three cases the paralysis has entirely disappeared at present, although in one case six months of treatment were required; in the fourth case only two months have elapsed since, so there is still time for improvement. But in the fifth case over six months have elapsed and there is some paresis of the arm and total hysteric analgesia of the entire arm. Wolf then reports a case from his own experience. The patient was an army officer of 30 and the blood was expelled from the arm to allow suture of a tendon in the left hand. A Martin constricting band was applied for about an hour and on its removal the entire arm was found paralyzed, with sensory disturbances, and four weeks later a reaction showing a tendency to degeneration was obtained. Conditions are gradually improving now, two months after the operation, and hope of a complete cure in a few months more seems justified. The patient had contracted syphilis nine years before, and Wolf is convinced that the old syphilis had predisposed the nerves to injury on slight provocation. The case teaches, he says, that long constriction of the arm should not be applied when there is a history of syphilis. It is possible, he suggests, that revision of the cases of ischemic paralysis on record might disclose unsuspected syphilis in the antecedents.

Zentralblatt für Gynäkologie, Leipsic

January 13, XXXVI, No. 2, pp. 33-64

103 Gynecologic Prophylaxis of Psychoses and Suicide. (Die gynäkologischen Läsionen bei der Manie des Selbstmords und die gynäkologische Prophylaxe gegen den Selbstmord beim Weibe.) E. Siemerling.
104 *Hysterotomy for Drainage After Laparotomies. (Ueber die Technik der zum Zweck einer Drainage ausgeführten Hysterotomien bei Laparotomien.) S. v. Toth.
105 Puerperal Auto-Infection. (Der "neue Gesichtspunkt" in der Selbstinfektion.) G. Winter.

104. Draining Through the Uterus After Laparotomies.—Toth expatiates on the advantages of draining through the vagina after abdominal gynecologic operations. For this he prefers amputating the uterus, regarding it as unwise to leave the uterus after removing the adnexa, even on one side only, for a puerperal purulent process. When the adnexa on both sides are to go, it is much better to remove the uterus with them as its retention then can do only harm. As a rule, amputation of the uterus offers all the advantages of removing the entire uterus while not depriving the floor of the pelvis of so much of its support. To ensure ample drainage, he slits the posterior wall of the stump of the cervix and the connected portion of the vagina, cutting backward with a knife held in forceps introduced into the cervix. Any tendency to bleed is arrested by a few sutures taken through the raw edges. Sponges are pushed down into the vagina from above, and, finally, the entire small pelvis is walled off from the general abdominal cavity by suturing it under a curtain of peritoneum. No effusion collects above the stump, which is thus amply drained. He summarizes the details of thirty cases in which this technic was applied with extremely good results even in the most complicated cases. All the women recovered promptly and completely. The technic avoids all possible danger of injuring the bladder or ureters or their innervation, and the vagina retains its normal architecture, size and shape. He gives two illustrations of the technic.

Policlinico, Rome

January 14, XIX, No. 3, pp. 77-112

106 *Negative Results from Roentgenotherapy of Nephritis. (Dell' azione curativa dei raggi x nelle nefriti.) D. Galausino.

106. Negative Results from Roentgenotherapy in Nephritis.—Galausino exposed a number of rabbits and guinea-pigs to the action of the Roentgen rays, striving to detect a curative action on experimental nephritis, but without any apparent result. He was never able to detect any difference between the behavior and findings in the kidneys exposed and in those of the control animals. Similar negative findings were obtained also in six clinical cases of chronic parenchymatous nephritis and one of transient mixed nephritis.

Brazil Medico, Rio de Janeiro

January 1, XXVI, No. 1, pp. 1-10

107 Simplification of Technic for Gravimetric Analysis: Weighing the Precipitates Without Drying. (Simplificaçao ao processo gravimetrico. Pesagem dos precipitados no estado humido.) A. Godoy.
108 Cystoscopy. (Cystoscopia, seu valor e suas indicaçoes.) A. B. Praguer.

Hospitalstidende, Copenhagen

November 22, LIV, No. 47, pp. 1329-1368

109 *Experimental Research on Epidemic Poliomyelitis. I. O. Thomsen.
110 *Medicolegal Test for Seminal Stains. (Paavisning af spermatozoer ved Hjælp af Jern-Hæmatoxylinfarvning.) V. Ellermann.
111 *Benzidin Test for Occult Blood. (Om Paavisning af meget smaa Blodmængder ved Benzidinprøven.) V. Ellermann.

December 6, No. 49, pp. 1469-1440

112 Spontaneous Dislocation of Crystalline Lens into the Vitreous. (Et Tilfælde af spontan Luxation af den cataractøse Linse ind i Corpus vitreum.) Jespersen.
113 *Development of Hypertrophy of the Prostate and Suprapubic Prostatectomy. (Hvad foregaar der ved den suprapubiske Prostatectomi? Hvorfra udvikles den skadelidte Prostatahypertrofi?) A. Lendorf. Commenced in No. 48.

December 13, No. 50, pp. 1441-1472

114 Bismuth Not Adapted for Neutralizing Excess of Acid. (Nogle Bemærkninger om Subnitras bismuth. og. Carb. bismuth. som. syremættende Midler.) C. Lundsgaard.

109. **Experimental Poliomyelitis.**—Thomsen states that Denmark has escaped epidemic poliomyelitis until recently, but last year (1911) there were 250 cases reported. He undertook special experimental research on the subject, and was able to induce the disease in thirteen monkeys inoculated with infectious material, including scrapings from the throat and nose of persons and monkeys with poliomyelitis. Some of the material was inoculated in the nasal mucosa, confirming the possibility of contracting the disease in this way. He was never able to obtain positive results with other animals than monkeys, and he thinks that contamination of the material inoculated was probably responsible for the positive results in this line which have been reported by Krause and Meinicke. Thomsen's attempts to induce immunity were all negative. The virulence of the virus seemed to be enhanced when it was injected with vaccine virus.

110. **Technic for Determination of Seminal Stains.**—Ellermann describes a method which stains the spermatozoa while leaving the cloth unstained, throwing the heads of the spermatozoa into great prominence; the specimen is durable and photographs well. A thread picked with a needle from the cloth is first stained with Dervieux's stain (0.5 gm. erythrosin in 100 gm. ammonia water). The stain is left in contact only one minute and is then washed off carefully; the thread is then placed on a slide and all the water carefully blotted up. The thread is then treated with Weigert's iron-hematoxylin tissue stain, the two solutions being mixed in equal parts just before use. The separation of the thread into its fibrils is done through the stain. After two minutes' contact the excess of stain is taken up as completely as possible with filter paper. A few drops of distilled water are then added and the picking apart of the fibrils completed, after which the specimen is washed with distilled water until it comes away clear. Mounted in balsam the spermatozoa show up black, the tail distinct its entire length and the heads blacker at the rear than in front, this latter characteristic serving to distinguish the true spermatozoa.

111. **The Benzidin Test with Small Amounts of Blood.**—Ellermann lays four or five round pieces of filter paper on top of each other in a flat, medium-sized Petri dish. The scrap of blood to be examined is placed in the center of the upper round and is then treated with the benzidin solution. He prefers Ascarelli's formula: a mixture of 2 c.c. of a saturated alcoholic solution of benzidin with 2 c.c. of 3 per cent. hydrogen peroxid and two drops of glacial acetic acid. In case of a positive reaction, blue stripes spread out like rays from the scrap of blood. The same small scrap of blood can be utilized also for spectroscopy and the precipitin reaction.

113. **Development of Hypertrophy of the Prostate.**—Lendorf presents anatomic and clinical evidence to prove that abnormal hypertrophy does not occur in the true prostate but from accessory prostatic glands. These glands hypertrophy while the true prostate—the two symmetrical side lobes enclosed on all sides by smooth circular muscular fibers, centrally and peripherally—does not participate in the abnormal hypertrophy. The accessory glands are found in the vicinity of the internal orifice of the urethra and through the prostatic portion, being bounded peripherally by the central circular muscular fibers of the sphincter of the bladder and prostate. The true prostate merely stretches as these accessory glands hypertrophy, serving as a capsule around the hypertrophied mass. He discusses the operative technic most logical when the development of the hypertrophy is understood.

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January 11, LXXIV, No. 2, pp. 49-88

115 *Conditions in Ancient Pompeii in Regard to Hygiene and Sanitation. (De hygiejniske Forhold i Oldtidens Pompeji.) H. Mygind. Commenced in No. 1.

115. **Sanitation in Ancient Pompeii.**—Mygind discusses, with twenty-six illustrations, the medical and sanitary aspects of Pompeii, its plan, its architecture, etc. The systematic arrangement of the city is extolled. There was no sewerage system, but the lava foundation and the slope of the town rendered this less necessary here than in Rome, for instance. Some of the streets evidently served as open sewers, with stepping stones at the crossings for foot passengers; the houses of the wealthy had no openings on the side facing these sewer-streets, except where the drain opened into the street. The houses of the poor were unventilated and unlighted cells but ample provision was made for public and private baths. On the whole, Mygind remarks in conclusion, in several of the points considered, Italy has not taken a single forward step in the more than two thousand years that have passed since Pompeii was built.

Books Received

Books received are acknowledged in this column and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for review in the interests of our readers and as space permits.

PRACTICAL ELECTROTHERAPEUTICS AND X-RAY THERAPY. With Chapters on Phototherapy, X-Ray in Eye Surgery, X-Ray in Dentistry, and Medicolegal Aspect of the X-Ray. By J. M. Martin, M.D., Professor of Electro-Therapeutics and X-Ray Methods in the Medical Department of Baylor University. Cloth. Price, $4. Pp. 446, with 219 illustrations. St. Louis: C. V. Mosby Company, 1912.

OLD-TIME MAKERS OF MEDICINE. The Story of the Students and Teachers of the Sciences Related to Medicine During the Middle Ages. By James J. Walsh, K.C.St.G., M.D., Ph.D., Dean and Professor of Nervous Diseases and of the History of Medicine at Fordham University School of Medicine. Cloth. Price, $2. Pp. 450. New York: Fordham University Press, 1911.

STUDIES ON LEPROSY. XIV, The Artificial Cultivation of the Bacillus of Leprosy; XV, Attempts at Specific Therapy in Leprosy. By Donald H. Currie, Moses T. Clegg and Harry T. Hollmann. Public Health and Marine-Hospital Service of the United States. Public Health Bulletin No. 47. Paper. Washington, 1912.

A HANDBOOK OF PRACTICAL TREATMENT. By Many Writers. Edited by John H. Musser, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, and A. O. J. Kelly, A.M., M.D. Volume III. Cloth. Price, $6 net. Pp. 1095, with illustrations. Philadelphia: W. B. Saunders Company, 1912.

FOURTH REPORT OF THE WELLCOME TROPICAL RESEARCH LABORATORIES. At the Gordon Memorial College, Khartoum. Andrew Balfour, M.D., B.Sc., F.R.C.P. (Edin.), Director. Volume A—Medical. Cloth. Price, $5. Pp. 404. New York: Toga Publishing Company, 35 West Thirty-Third Street

HANDBOOK OF PHYSIOLOGY. By W. D. Halliburton, M.D., LL.D., F.R.C.P., Professor of Physiology, King's College, London. Tenth Edition (Being the Twenty-Third Edition of Kirkes' Physiology). Cloth. Price, $3. Pp. 925, with 592 illustrations. Philadelphia: P. Blakiston's Son & Co., 1911.

BLOOD-VESSEL SURGERY AND ITS APPLICATIONS. By Charles Claude Guthrie, M.D., Ph.D., Professor of Physiology and Pharmacology, University of Pittsburgh. International Medical Monographs. Cloth. Price, $4. Pp. 360, with illustrations. New York: Longmans, Green & Co., 1912.

MEDICAL SERVICE IN CAMPAIGN. A Handbook for Medical Officers in the Field. By Major Paul Frederick Straub, Medical Corps (General Staff), United States Army. Second Edition. Leather. Price, $1.50. Pp. 186, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

PRACTICAL GYNECOLOGY. A Comprehensive Text-Book for Students and Physicians. By E. E. Montgomery, M.D., LL.D., Professor of Gynecology, Jefferson Medical College. Fourth Edition. Price, $6. Pp. 857, with illustrations. Philadelphia: P. Blakiston's Son & Co., 1912.

THE AMERICAN YEAR-BOOK. A Record of Events and Progress, 1911. Edited by Francis G. Wickware, B.A., B.Sc., Under Direction of a Supervisory Board Representing National Learned Societies. Cloth. Price, $3.50. Pp. 863. New York: D. Appleton & Co., 1912.

THE SURGICAL CLINICS OF JOHN B. MURPHY, M.D., AT MERCY HOSPITAL, CHICAGO. Volume 1, Number 1. Paper. Pp. 133, with illustrations. Six numbers a year. Price per year, $8. Philadelphia: W. B. Saunders Company, 1912.

BRONCHIAL ASTHMA. Its Pathology and Treatment. By J. B. Berkart, M.D. Third Edition. Cloth. Price, 5 shillings. Pp. 150. New York: Oxford University Press, 1911.

SURGERY AND SOCIETY. A Tribute to Listerism. By C. W. Saleeby, M.D., F.R.S.E. Cloth. Price, $2.50 net. Pp. 395. New York: Moffat, Yard & Co., 1912.

SECOND REPORT OF THE LAKE MICHIGAN WATER COMMISSION. President, George B. Young, Health Commissioner of Chicago. Paper. Price, $1. Pp. 204.

FIRST ANNUAL REPORT OF THE BUREAU OF VITAL STATISTICS OF THE STATE OF OHIO, 1909. Two Volumes. Cloth. Pp. 1067. Springfield, Ohio, 1911.

FOURTEENTH ANNUAL REPORT OF THE MANAGERS OF THE NEW JERSEY STATE VILLAGE FOR EPILEPTICS, SKILLMAN, SOMERSET CO., N. J., 1911.

FIRST REPORT OF THE HOLMAN ASSOCIATION FOR THE PROMOTION OF RURAL NURSING, HYGIENE AND SOCIAL SERVICE. Baltimore, 1911.

TRANSACTIONS OF THE AMERICAN CLIMATOLOGICAL ASSOCIATION. Volume XXVII, 1911. Cloth. Pp. 410. Philadelphia.

BIENNIAL REPORT OF THE BOARD OF MANAGERS OF THE SPRINGFIELD HOSPITAL, SYKESVILLE, MD. 1909-1911.

FIFTEENTH AND SIXTEENTH REPORTS OF THE ELLIOT CITY HOSPITAL, KEENE, N. H. 1909 and 1910.

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